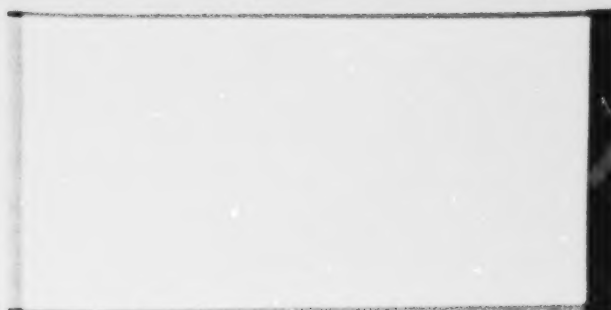
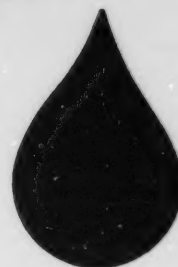




Energy
Ontario



Transportation Energy Management Program



Ministry of
Transportation and
Communications

Ministry
of
Energy

**Transportation
Energy Data
Report**

Volume 3

Transportation Energy Data Report

Volume 3

Prepared by:
Transportation Energy Office, MTC

Published by:
The Transportation Energy Management Program

Transportation Technology and Energy Branch
Ontario Ministry of Transportation and Communications
Hon. James W. Snow, Minister
H.F. Gilbert, Deputy Minister

Ontario Ministry of Energy
Hon. Philip Andrewes, Minister
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Downsview, Ontario
M3M 1J8
(416) 248-7226

September 1984

FOREWORD

The Transportation Energy Management Program (TEMP) is a joint program of the Ministry of Transportation and Communications and the Ministry of Energy. TEMP's aim is to initiate and co-ordinate actions that will reduce Ontario's transportation oil use by increasing the efficiency with which oil products are used, by reducing travel requirements, and by introducing alternatives to oil products as transportation fuels.

This report is produced in response for the need expressed by government agencies, research groups, and businesses for a central source of transportation energy data. These data are collected and published annually in a comprehensive format under one cover for greater convenience. This is the third volume of the series published.

The Transportation Energy Data Reports are used to monitor current trends in transportation energy demand, to ascertain relationships between various transportation energy variables, and to provide a forum for the presentation for transportation energy data in graphic and tabular form.

Some additions contained in this edition include information on fuel consumption by transportation mode and operating costs for trucks, mopeds, propane and propane-powered vehicles.

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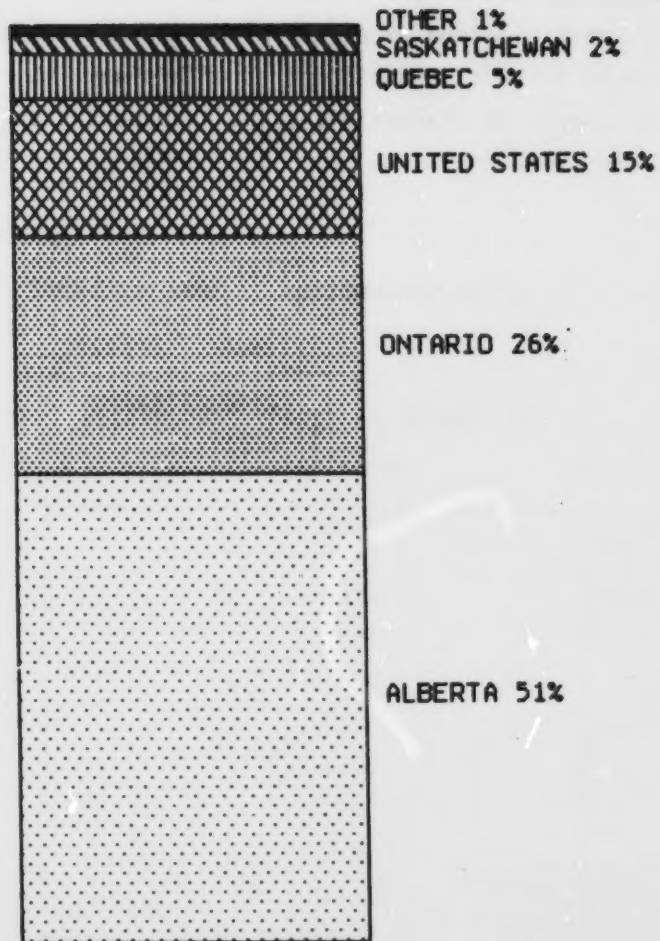
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SECTION ONE:

TRANSPORTATION ENERGY USE AND SUPPLY

1.1/ Ontario's Primary Energy Sources, 1982 Estimates

The largest proportion (84%) of Ontario's total energy supplies originate within Canada. Fifty-one percent comes from the province of Alberta in the form of crude oil and natural gas, and 26% originates within Ontario, mainly through nuclear-powered, coal- or hydro-generated electricity. Surprisingly, only one percent of energy consumed in Ontario originates from outside of North America. However, the entire world market dictates supply and pricing, thus independence from foreign sources is illusory.



Source : Ministry of Energy

Figure 1.1/ Ontario's Primary Energy Sources, 1982 Estimates

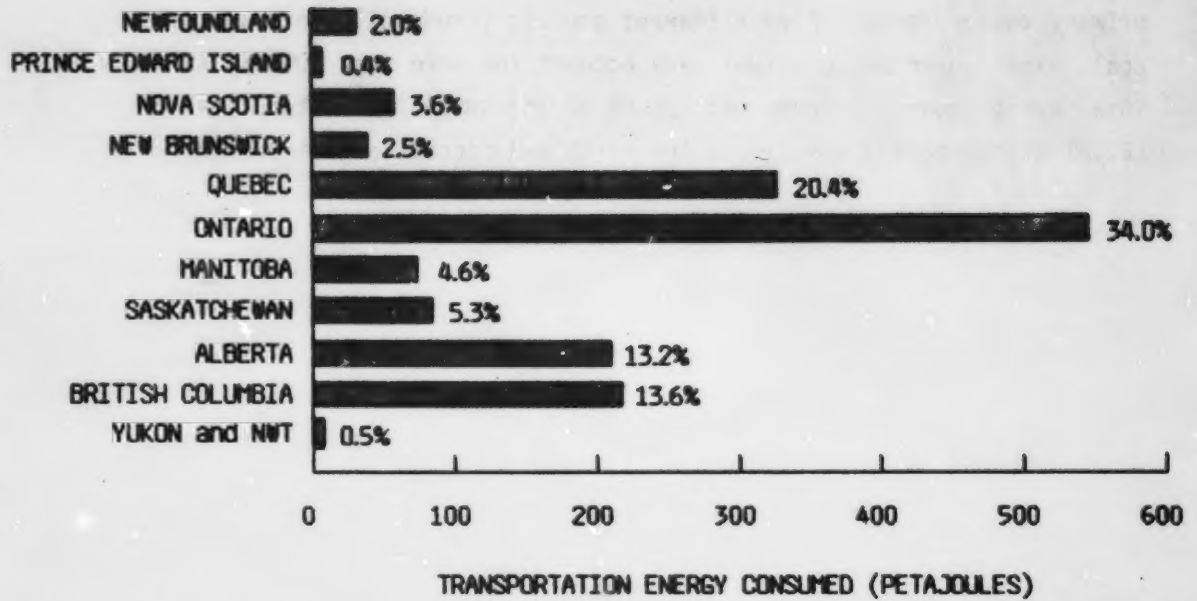
1.2/ Transportation Energy Consumption by Province, 1982

As shown in the accompanying bar graph, the largest proportion of transportation energy consumption within Canada occurs in the province of Ontario. Ontario accounts for 34% of Canada's total transportation energy use. Although this might be expected, given the larger number of motor vehicles, licensed drivers, and kilometres of highway, it reveals Ontario's greater dependence on changes affecting transportation energy consumption, supply and price.

Table 1.2/ Transportation Energy Consumption by Province, 1982

PROVINCE	TRANSPORTATION ENERGY CONSUMPTION (petajoules)	PERCENT
Newfoundland	32.8	2.0
Prince Edward Island	6.4	0.4
Nova Scotia	58.6	3.6
New Brunswick	39.6	2.5
Quebec	327.9	20.4
Ontario	545.7	34.0
Manitoba	74.3	4.6
Saskatchewan	85.1	5.3
Alberta	211.5	13.2
British Columbia	217.9	13.6
Yukon and NWT	7.2	0.5
TOTAL	1607.0	100.0

Source: Statistics Canada (57-003)

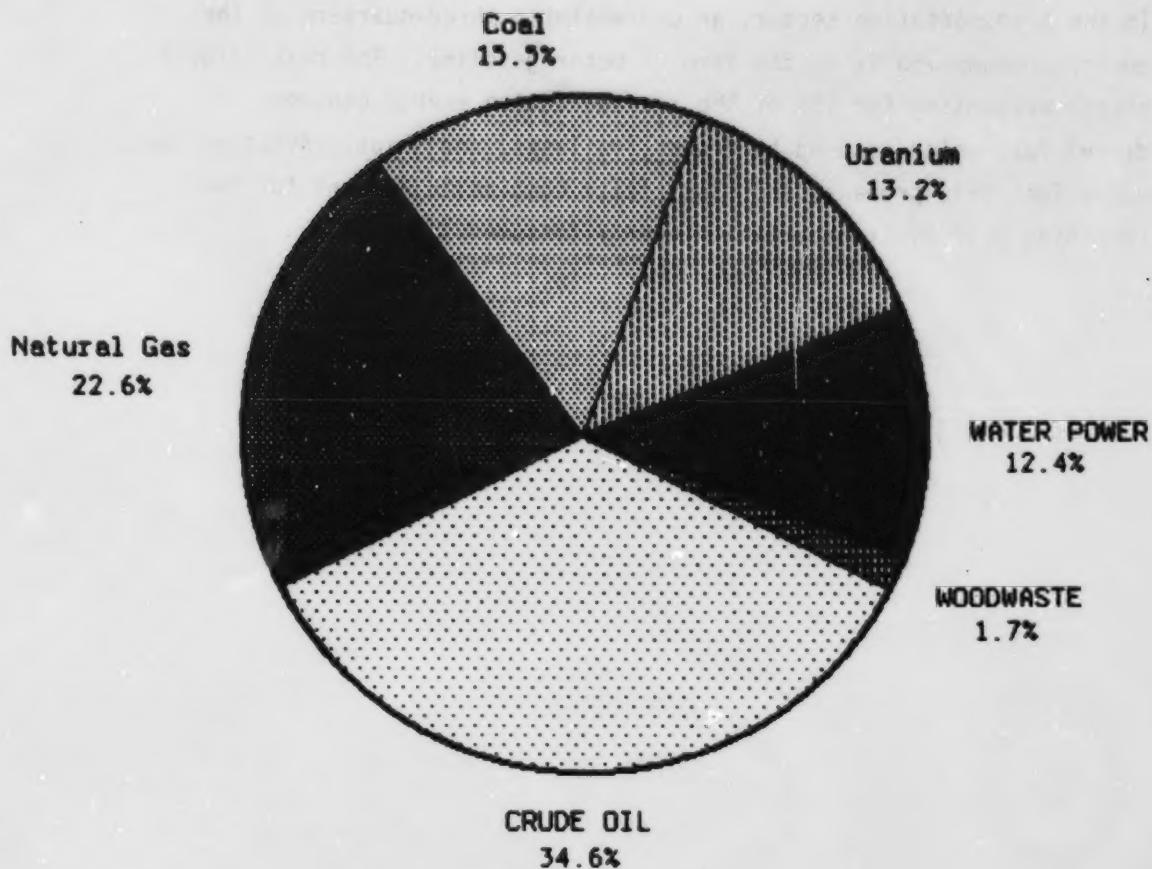


Source : Statistics Canada

Figure 1.2/ Transportation Energy Consumption by Province, 1982

1.3/ Ontario's Primary Energy Consumption, 1982 Estimates

The accompanying pie graph shows the diversified nature of Ontario's primary energy forms. Five different sources (crude oil, natural gas, coal, water power and uranium) each account for more than 10% of the total energy source. Crude oil (34.6% of the total) and natural gas (22.6% of the total) constitute the first and second largest sources.



TOTAL CONSUMPTION : 3170 PETAJOULES

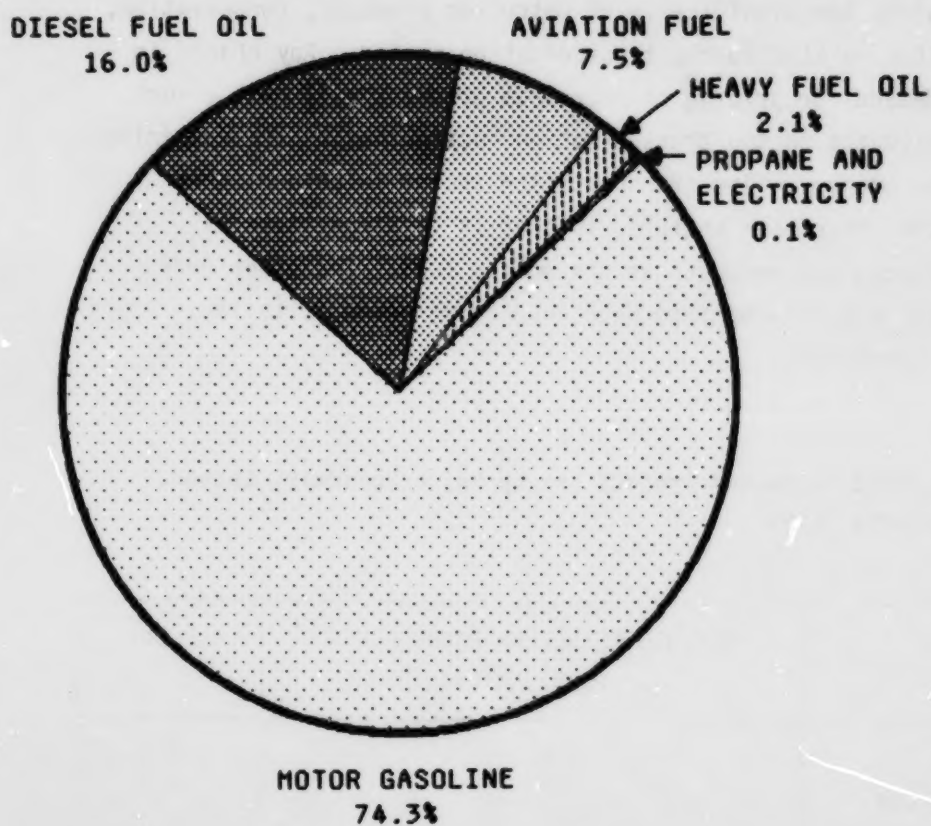
Source : Ministry of Energy

Figure 1.3/ Ontario's Primary Energy Consumption, 1982 Estimates

1.4/ Transportation Energy Use by Fuel Type, Ontario, 1982

In the transportation sector, an overwhelming three-quarters of the energy consumption is in the form of motor gasoline. The next largest share, accounting for 16% of the transportation energy consumed, is diesel fuel which is used by trucks, railways, and ships. Aviation fuel, heavy fuel oil, propane, and electricity combine to account for the remaining 9.7% of transportation energy consumed.





Source : Statistics Canada (57-003)

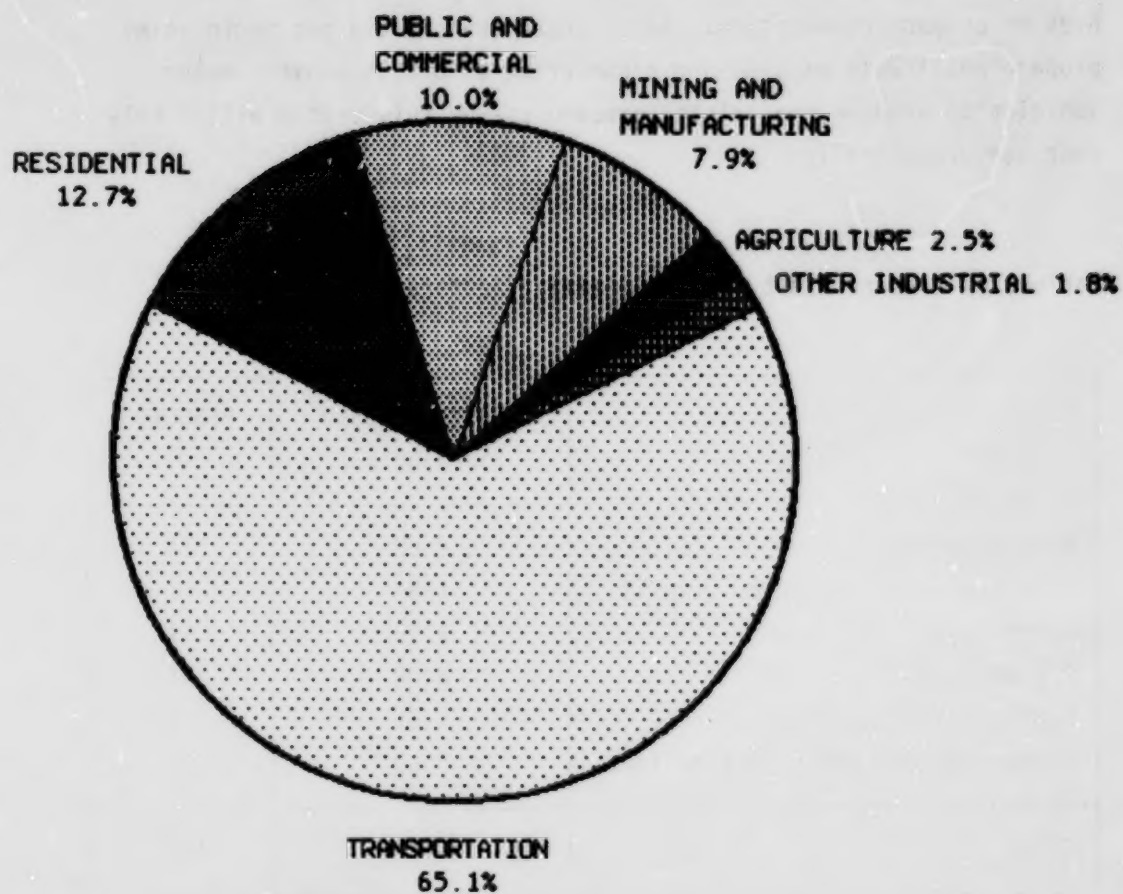
Figure 1.4/ Transportation Energy by Fuel Type, Ontario, 1982

**1.5/ Refined Petroleum Product Use by Major Consuming Sector,
Ontario, 1982**

The largest proportion of the total refined petroleum products used in Ontario is consumed by the transportation sector. This sector accounts for an overwhelming 65.1% of all petroleum products. The accompanying pie graph depicts the significance of petroleum products, conservation, and substitution related to the transportation sector. Any change in the supply, demand, or pricing of petroleum products will have a much more profound impact on the transportation sector than on the remaining sectors of the economy. The transportation sector is unique, when compared to the other user sectors, in that it is almost totally dependent on petroleum products as its motive fuel. The other user sectors have been switching from petroleum-based products to less expensive alternatives.

**Table 1.5/ Refined Petroleum Product Use by Major Consuming Sector,
Ontario, 1982**

SECTOR	REFINED PETROLEUM PRODUCT USE (petajoules)	PERCENT
Mining and Manufacturing	62.2	7.9
Other Industrial	13.8	1.8
Transportation	512.7	65.1
Agriculture	20.0	2.5
Residential	100.2	12.7
Public and Commercial	79.0	10.0
TOTAL	787.9	100.0



Source : Statistics Canada (57-003)

Figure 1.5/ Refined Petroleum Product Use by Major Consuming Sector,
Ontario, 1982

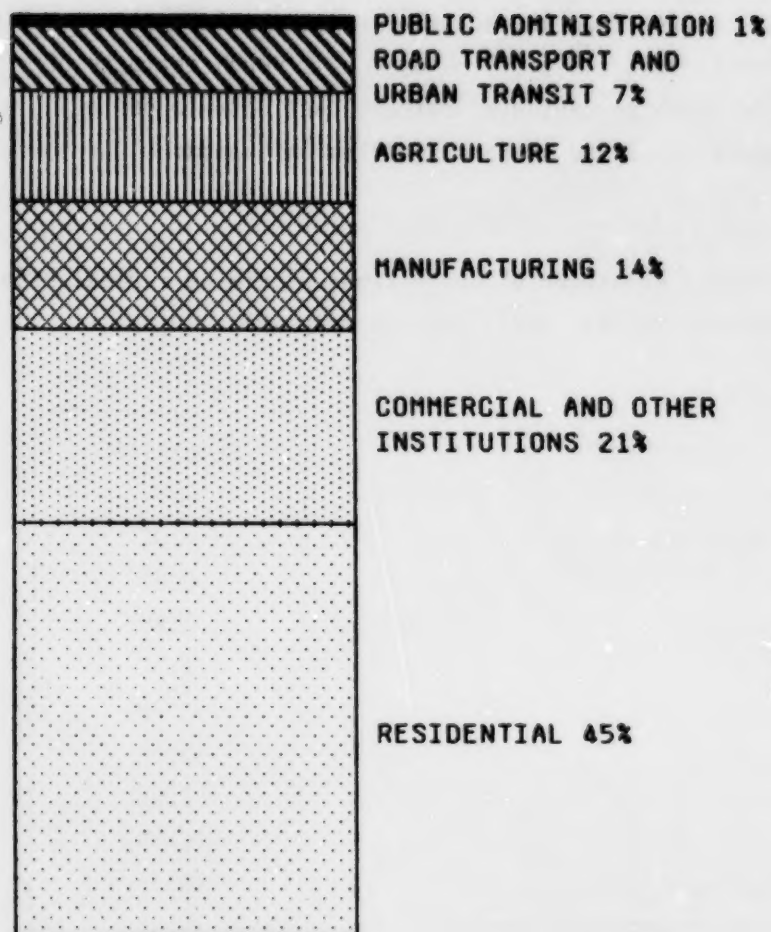
1.6/ Propane Use by Major Consuming Sectors, Ontario, 1982

Ontario has only recently begun to use propane as a transportation fuel. As a result, in 1982, road transport and urban transit accounted for only 6.9% of propane consumption. Since urban transit did not begin using propane until July of 1982 and a concerted effort to convert motor vehicles to propane now exists, propane use by this sector will likely increase dramatically.

Table 1.6/ Propane Use by Major Consuming Sectors, Ontario, 1982

SECTOR	ENERGY CONSUMED (terajoules)	PERCENT
Manufacturing	2600	14
Road Transport and Urban Transit	1287	7
Agriculture	2165	12
Residential	8408	45
Public Administration	31	1
Commercial and Other Institutions	4020	21
TOTAL	18 510	100%

Source: Statistics Canada (57-003)



Source : Statistics Canada (57-003)

Figure 1.6/ Propane Use by Major Consuming Sectors, Ontario, 1982

**1.7/ Provincial Breakdown of Conversions Receiving Federal Propane
Conversion Grants, April 1981 to July 1982**

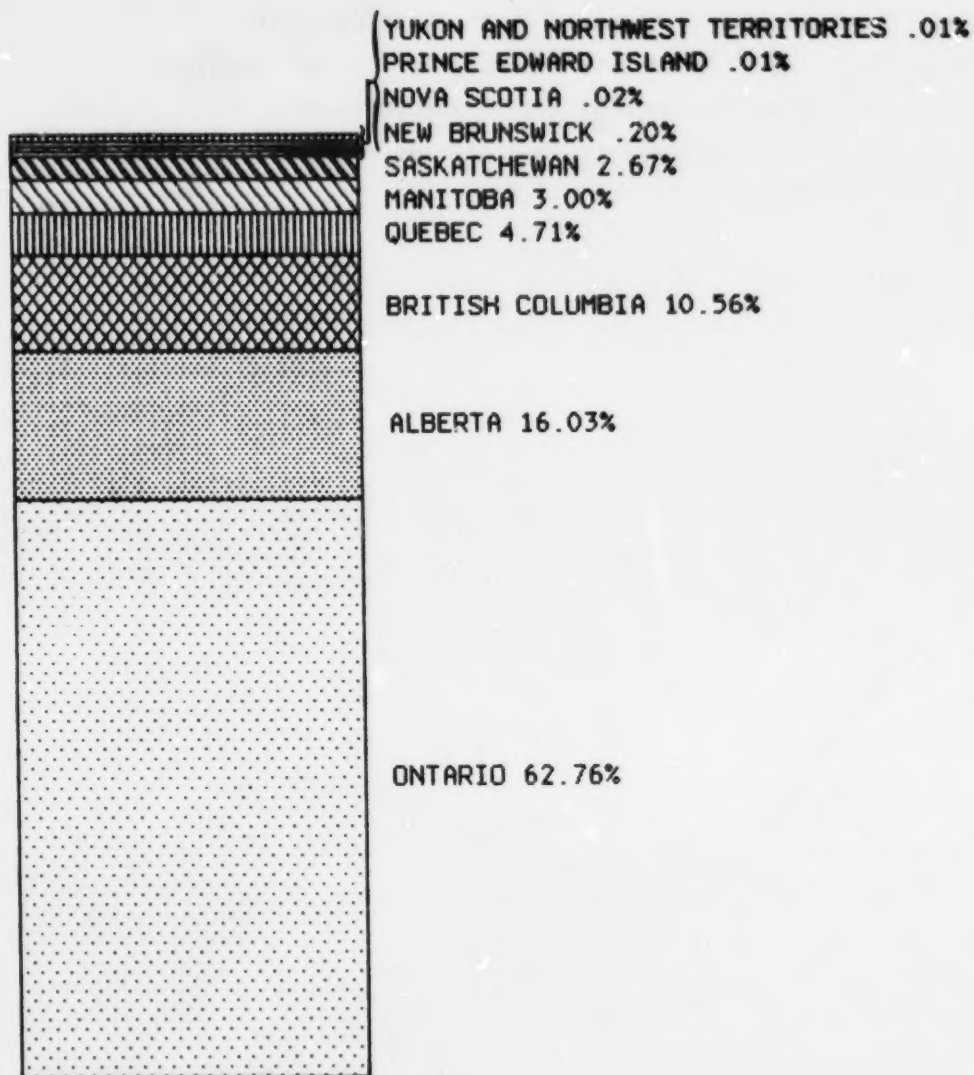
Although the percentages for those provinces receiving federal propane conversion grants differ from the actual percentages for propane vehicle distribution, the figures can still be used as a rough estimate of propane use. The above percentages indicate that Ontario has a significant proportion of the propane vehicles in Canada.

**Table 1.7/ Provincial Breakdown of Conversions Receiving Federal Propane
Conversion Grants, April 1981 to July 1982**

PROVINCE	PERCENTAGE*
Prince Edward Island	0.01
Nova Scotia	0.02
New Brunswick	0.20
Quebec	4.71
Ontario	62.76
Manitoba	3.00
Saskatchewan	2.67
Alberta	16.03
British Columbia	10.56
Yukon and Northwest Territories	0.01

Source: Energy, Mines and Resources Canada

* NOTE: Due to rounding, the percentages do not total 100%.

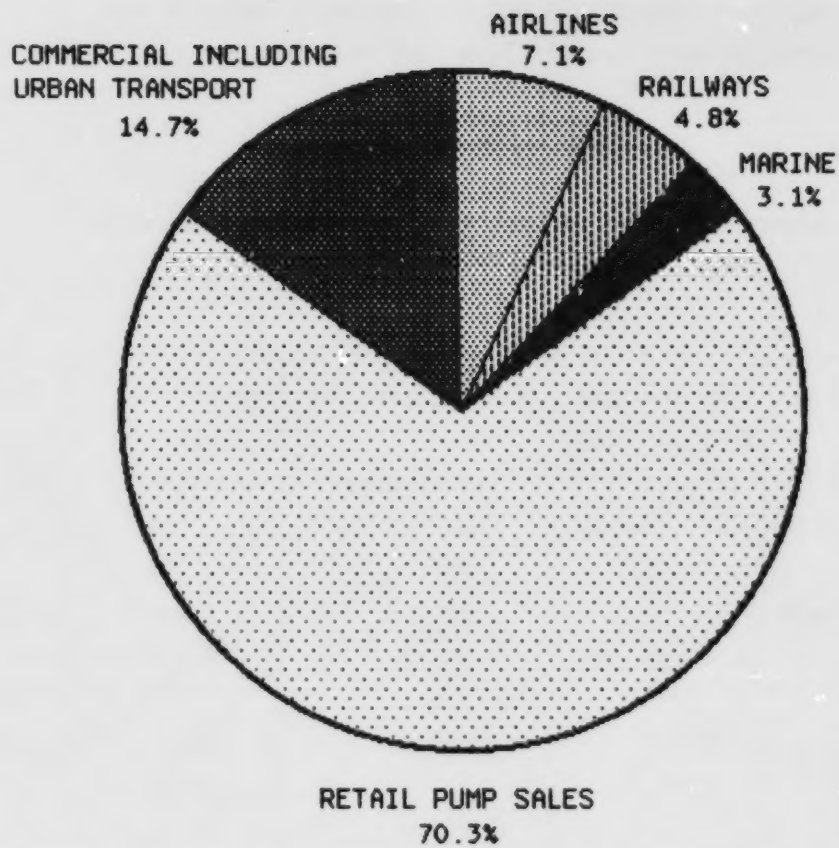


Source : Energy, Mines and Resources Canada

Figure 1.7/ Provincial Breakdown of Conversions Receiving Federal Propane Conversion Grants, April 1981 to July 1983

1.8/ Transportation Energy Use by Mode, Ontario, 1982

As shown in the accompanying pie graph, in 1982, road transportation accounted for 85% of the energy consumed by the transportation sector. Commercial fuel sales (14.7%) and retail pump sales (70.3%) combined represent the total energy consumed by road transportation. The remaining modes of transportation (air, marine, and rail) collectively accounted for 15% of the energy consumption.



Source : Statistics Canada (57-003)

Figure 1.8/ Transportation Energy Use by Mode, Ontario, 1982

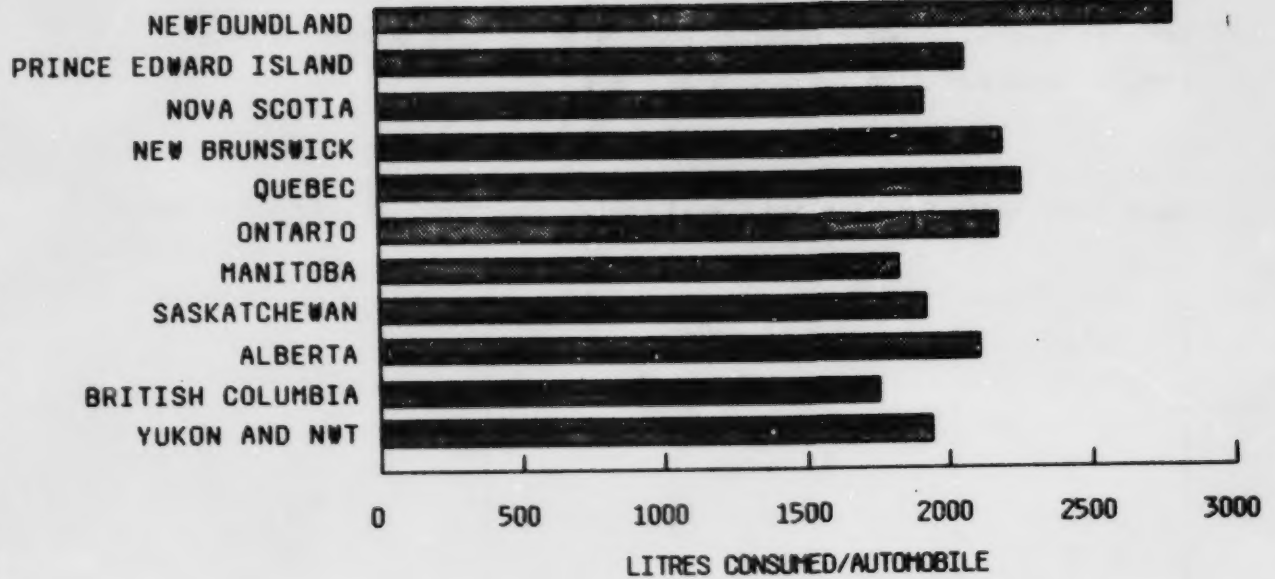
1.9/ Average Number of Litres of Gasoline Consumed Per Automobile, by Province, 1982

The average fuel consumption for an automobile in Ontario is approximately 2200 L annually. Ontario's consumption ranks fourth among the provinces. There seems to be little correlation between the regions of Canada and the average fuel consumption per automobile, except for the western provinces having proportionately less fuel consumed per automobile.

Table 1.9/ Average Number of Litres of Gasoline Consumed Per Automobile, by Province, 1982

PROVINCE	ROAD VEHICLE REGISTRATIONS (thousands)	GASOLINE CONSUMED (megalitres)	NUMBER OF LITRES PER VEHICLE
Newfoundland	191	532.0	2 792
Prince Edward Island	68	140.6	2 061
Nova Scotia	535	1 024.7	1 914
New Brunswick	373	819.5	2 198
Quebec	2 826	6 369.9	2 254
Ontario	5 060	10 989.5	2 174
Manitoba	670	1 219.3	1 819
Saskatchewan	687	1 315.3	1 913
Alberta	1 787	3 758.6	2 102
British Columbia	2 075	3 636.9	1 753
Yukon and NWT	37	72.3	1 934

Source: Statistics Canada (57-003, 53-219)



Source : Statistics Canada (57-003, 53-219)

Figure 1.9/ Average Number of Litres of Gasoline Consumed Per Automobile,
by Province, 1982

1.10/ Motor Gasoline and Diesel Fuel Consumption, Ontario, 1970-1983

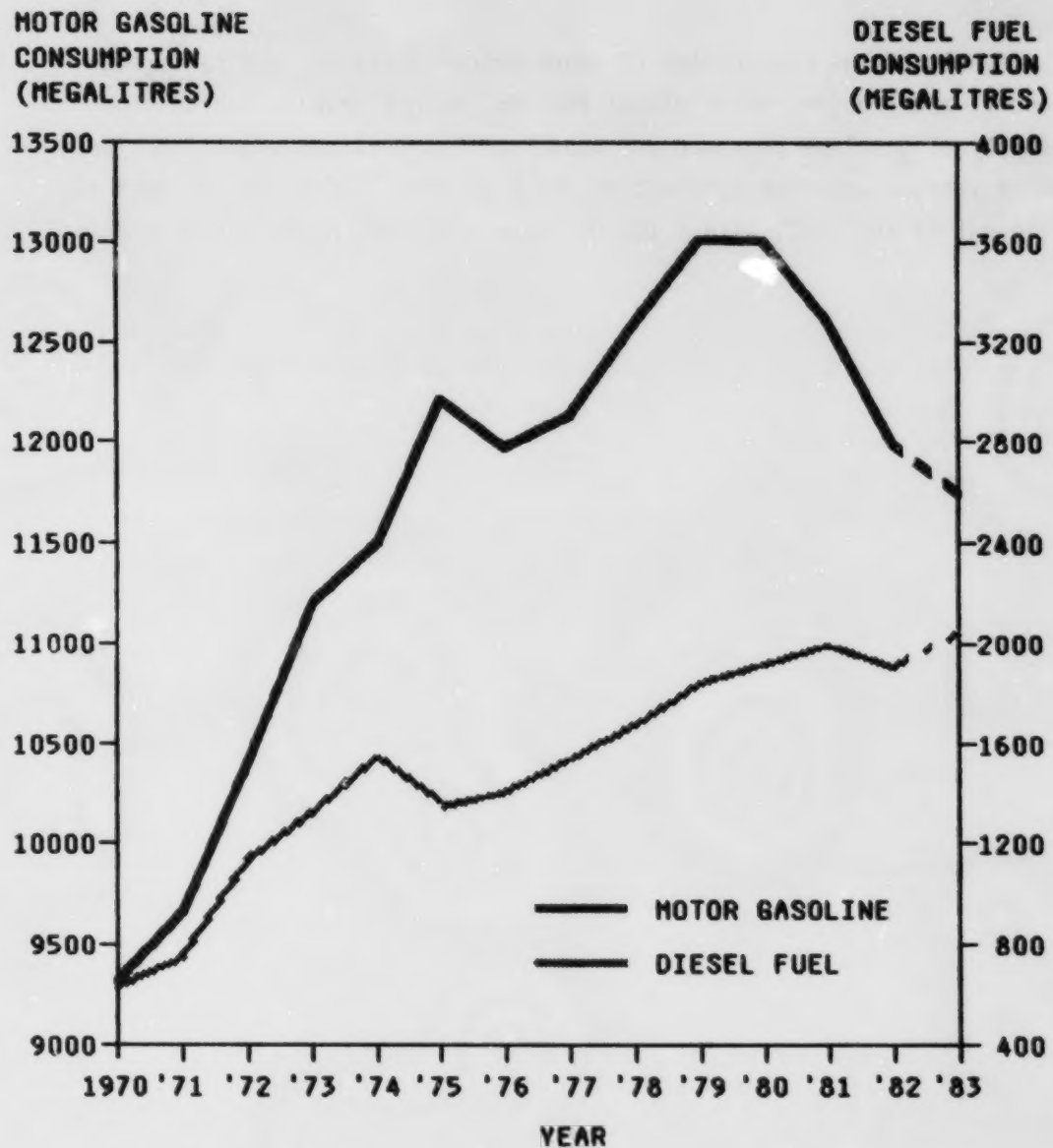
Motor gasoline consumption by Ontario's transportation sector has been decreasing since 1980 as a result of greater awareness of the importance of fuel conservation and fuel efficient vehicles. Diesel fuel consumption has risen over 200% since 1970. This growth can be attributed to increased use of diesel fuel by automobiles and the trend away from vehicles powered by motor gasoline and toward vehicles powered by other forms of transportation fuel, such as diesel fuel.

Table 1.10/ Motor Gasoline and Diesel Fuel Consumption, Ontario, 1970-1983

YEAR	GASOLINE (megalitres)	DIESEL FUEL (megalitres)
1970	9 321	633
1971	9 656	751
1972	10 414	1 138
1973	11 193	1 322
1974	11 506	1 549
1975	12 207	1 370
1976	11 968	1 399
1977	12 138	1 533
1978	12 597	1 674
1979	13 014	1 843
1980	13 005	1 918
1981	12 607	1 990
1982	11 983	1 904
1983*	11 749	2 046

* NOTE: Consumption for November and December of 1983 has been estimated.

Sources: Ministry of Revenue and Statistics Canada (45-004)



Sources : Ministry of Revenue and Statistics Canada (45-004)

NOTE: Consumption for November and December of 1983 has been estimated.

Figure 1.10/ Motor Gasoline and Diesel Fuel Consumption, Ontario,
1970-1983

**1.11/ Number of Litres of Gasoline Consumed Per Household, Ontario,
1971-1982**

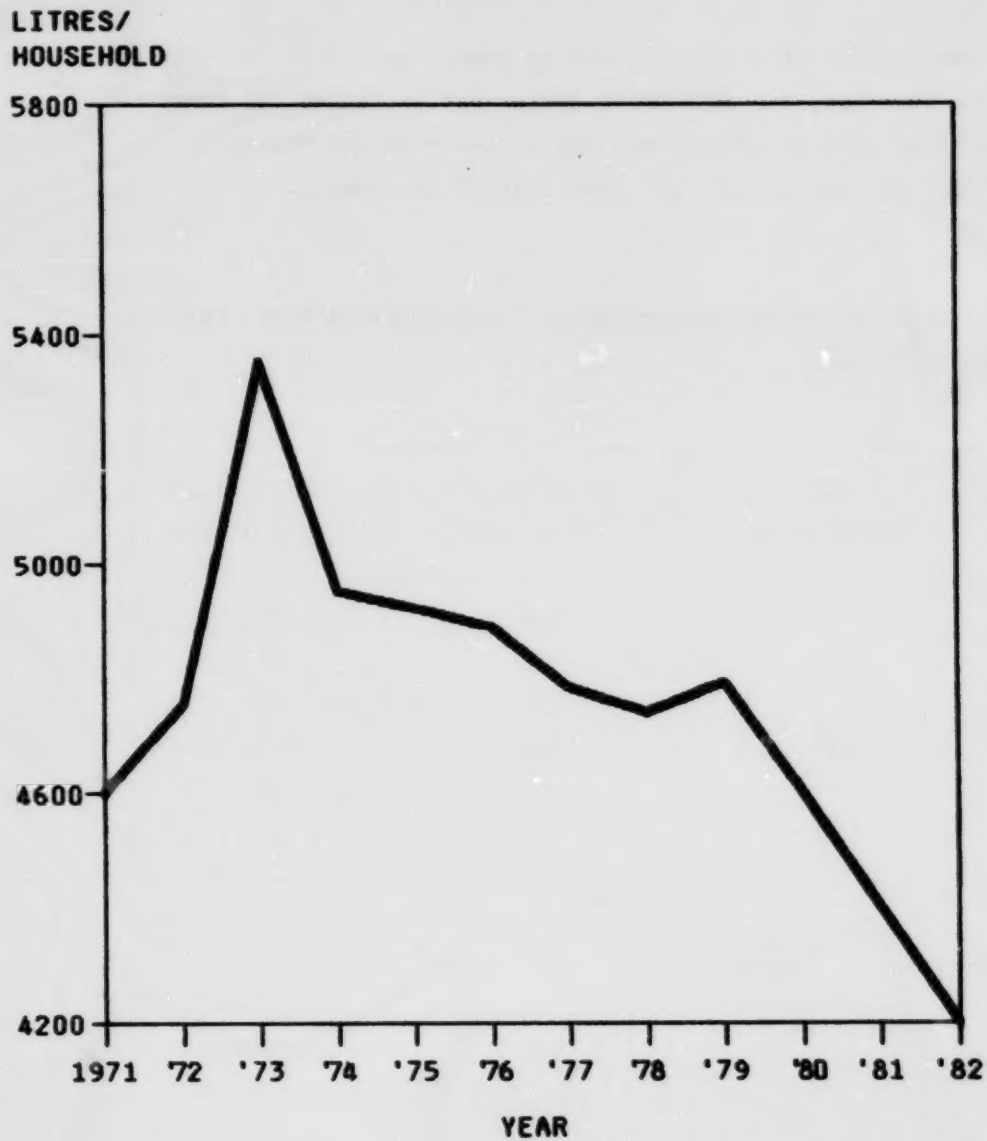
As a result of the combination of sharp price increases, the faltering economy, and greater use of diesel fuel in freight transportation, the quantity of gasoline consumed per household has declined significantly in recent years. Gasoline consumption per household in Ontario declined 25% between 1973 and 1983, with a 16% decrease occurring between 1979 and 1982.



Source: Ministry of Energy and Northern Development, Ontario (1984)

Note: The consumption of gasoline per household is based on the average of the consumption of gasoline per household in the two years preceding the year of measurement.

Figure 1.11/ Number of Litres of Gasoline Consumed Per Household, Ontario, 1971-1982



Source : Ministry of Energy

**Figure 1.11/ Number of Litres of Gasoline Consumed Per Household,
Ontario, 1971-1982**

**1.12/ Motor Gasoline Consumption by Transportation Mode, Ontario,
1978-1983**

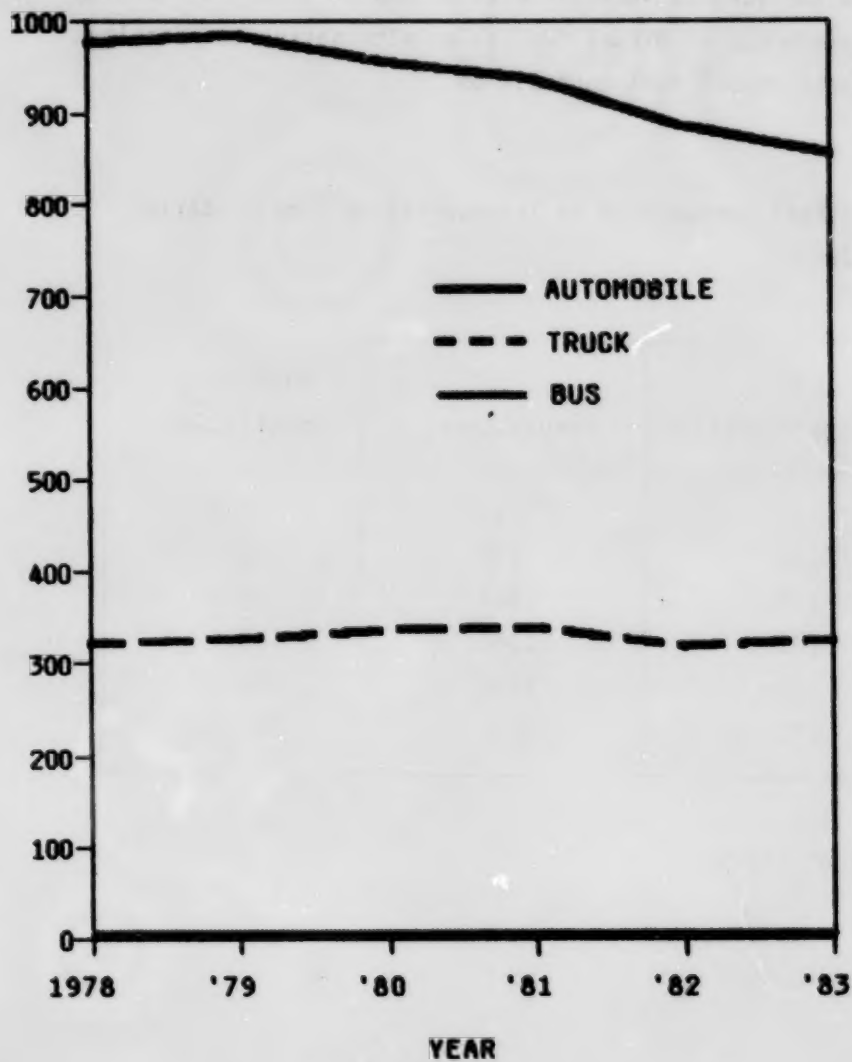
While the consumption of motor gasoline by trucks and buses has shown virtually no increase, the automobile sector has decreased its consumption by 12% from 1978 to 1983. This decrease can be attributed to increased fuel efficiency and fuel conservation awareness.

**Table 1.12/ Motor Gasoline Consumption by Transportation Mode, Ontario,
1978-1983**

Year	BUS (megalitres)	TRUCK (megalitres)	AUTOMOBILE (megalitres)
1978	6.46	322	976
1979	6.54	328	984
1980	6.59	336	957
1981	6.77	339	938
1982	6.70	319	887
1983	6.86	324	857

Source: Ministry of Energy

**MOTOR
GASOLINE
(MEGALITRES)**



Source : Ministry of Energy

Figure 1.12/ Motor Gasoline Consumption by Transportation Mode, Ontario,
1978-1983

**1.13/ Diesel Fuel Consumption by Transportation Mode, Ontario,
1978-1983**

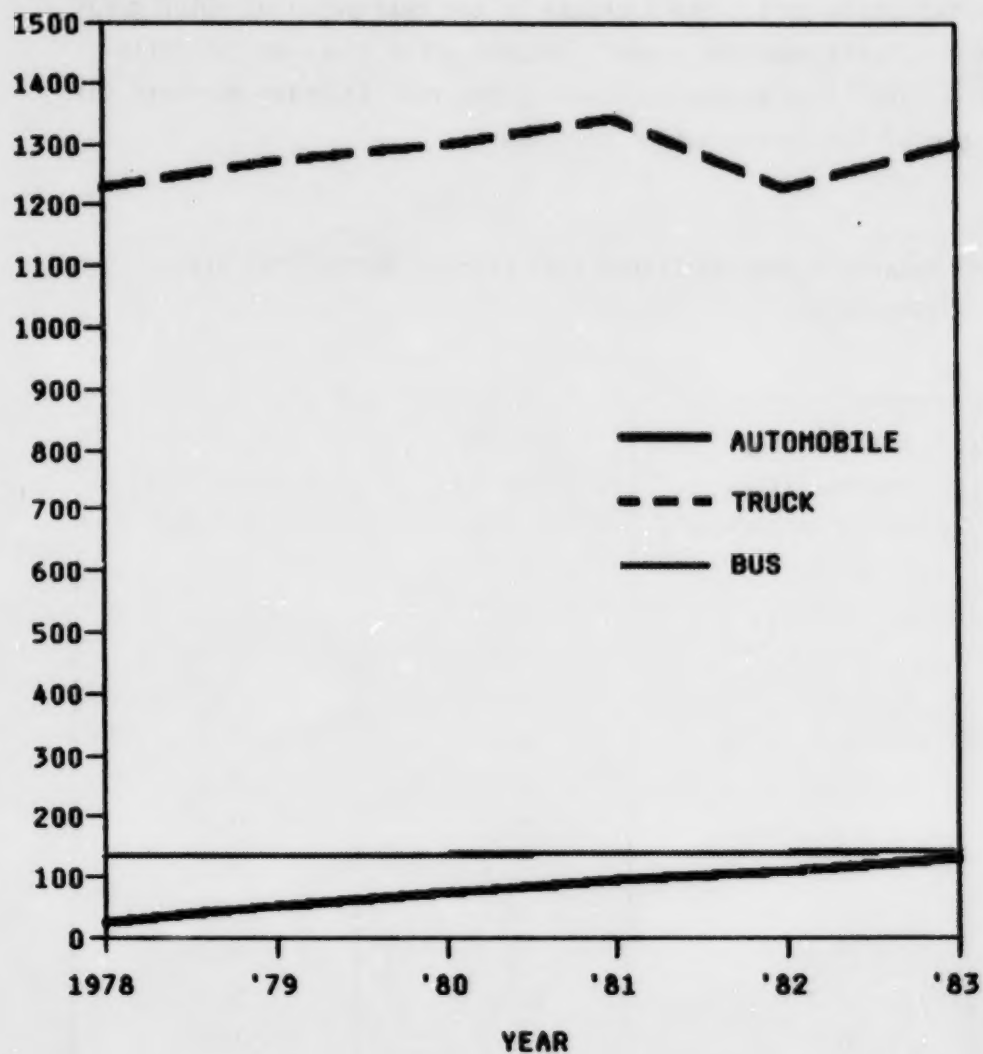
All modes of transportation increased their diesel fuel consumption, but automobiles showed the largest increase with a jump of 385% from 1978 to 1983. Increased awareness of diesel fuel as an alternative to petroleum resulted in increased diesel fuel consumption.

**Table 1.13/ Diesel Fuel Consumption by Transportation Mode, Ontario,
1978-1983**

YEAR	BUS (megalitres)	TRUCK (megalitres)	AUTOMOBILE (megalitres)
1978	135	1230	27.4
1979	136	1270	52.1
1980	137	1300	72.4
1981	141	1340	95.6
1982	140	1230	111.0
1983	143	1300	133.0

Source: Ministry of Energy

**DIESEL
FUEL
(MEGALITRES)**



Source : Ministry of Energy

**Figure 1.13/ Diesel Fuel Consumption by Transportation Mode, Ontario,
1978-1983**

**1.14/ Ontario's Regular Leaded Fuel Prices, Nominal and Real,
1971-1983**

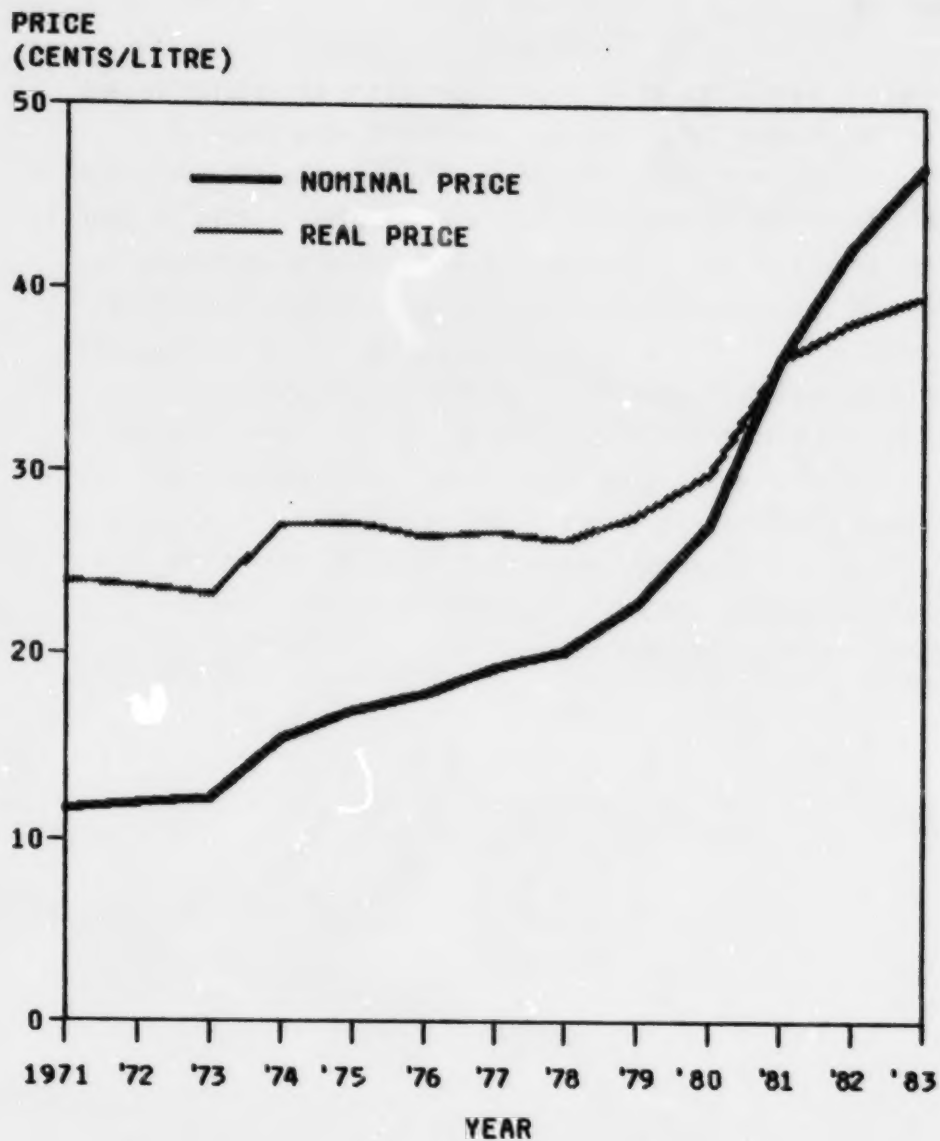
The nominal or actual price of motor gasoline in Ontario has increased by more than 300% since 1971. The increase in the real price of motor gasoline is less (65.8%) when the annual consumer price index or the inflation rate is taken into account. However, the real increase warrants the extensive use of fuel conservation measures.

**Table 1.14/ Ontario's Regular Leaded Fuel Prices, Nominal and Real,
1971-1983**

YEAR	NOMINAL PRICE (cents/litre)	PRICE INDEX (1981=100)	REAL PRICE* (cents/litre)
1971	11.5	48.0	24.0
1972	11.8	49.8	23.7
1973	12.1	52.1	23.2
1974	15.3	56.4	27.1
1975	16.9	61.9	27.2
1976	17.8	67.3	26.5
1977	19.3	72.2	26.8
1978	20.2	76.6	26.3
1979	22.8	82.5	27.6
1980	27.1	90.2	30.0
1981	36.2	100.0	36.2
1982	42.4	110.8	38.3
1983	46.8	117.7	39.8

Sources: Ministry of Energy and Statistics Canada (62-001)

* NOTE: $\text{Real Price} = \frac{\text{Nominal Price}}{\text{Price Index}} \times 100$

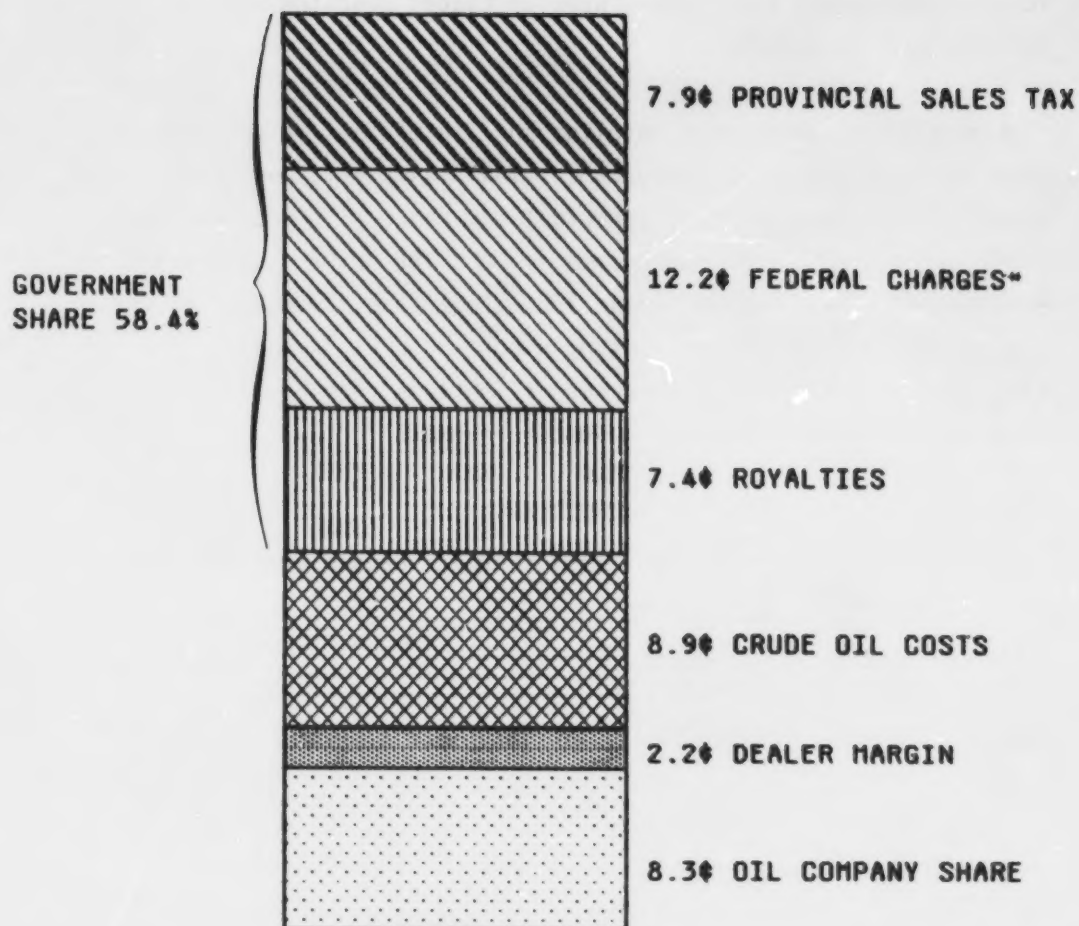


Sources : Ministry of Energy and Statistics Canada (62-001)

Figure 1.14/ Ontario's Regular Leaded Fuel Prices, Nominal and Real,
1971-1983

**1.15/ Breakdown of Average Leaded Gasoline Prices, Ontario,
December 1983**

Based on an average pump price of 47.1 cents per litre of regular leaded motor gasoline in December 1983, the component costs of a litre of gasoline are indicated in Figure 1.15. Federal and provincial taxes and royalties account for 58% of the retail price of gasoline. This is down from 68% in the spring of 1982. The decline was caused by decreases in federal charges and royalties combined with a large increase (128%) in the cost of crude oil. It is important to note that this disaggregation of costs is highly dependent upon the categorization of the components. In some sources, the Petroleum Compensation and Canadian Ownership charges are not represented as taxes because these revenues are used to balance imported oil prices with Canadian prices and to increase Canadian ownership in the petroleum sector, respectively. Also, the refiner's margin will vary by company and year, depending on the individual taxation deferment plan of the oil company.



AVERAGE PRICE PER LITRE 47.1¢

Source : Petroleum Resources Communication Foundation

* NOTE: Federal charges include sales tax, excise tax, petroleum compensation charge and Canadian ownership charge. Royalties are paid to producing provinces, reserves or land with historical significance and foreign countries.

Figure 1.15/ Breakdown of Average Leaded Gasoline Prices, Ontario, December 1983

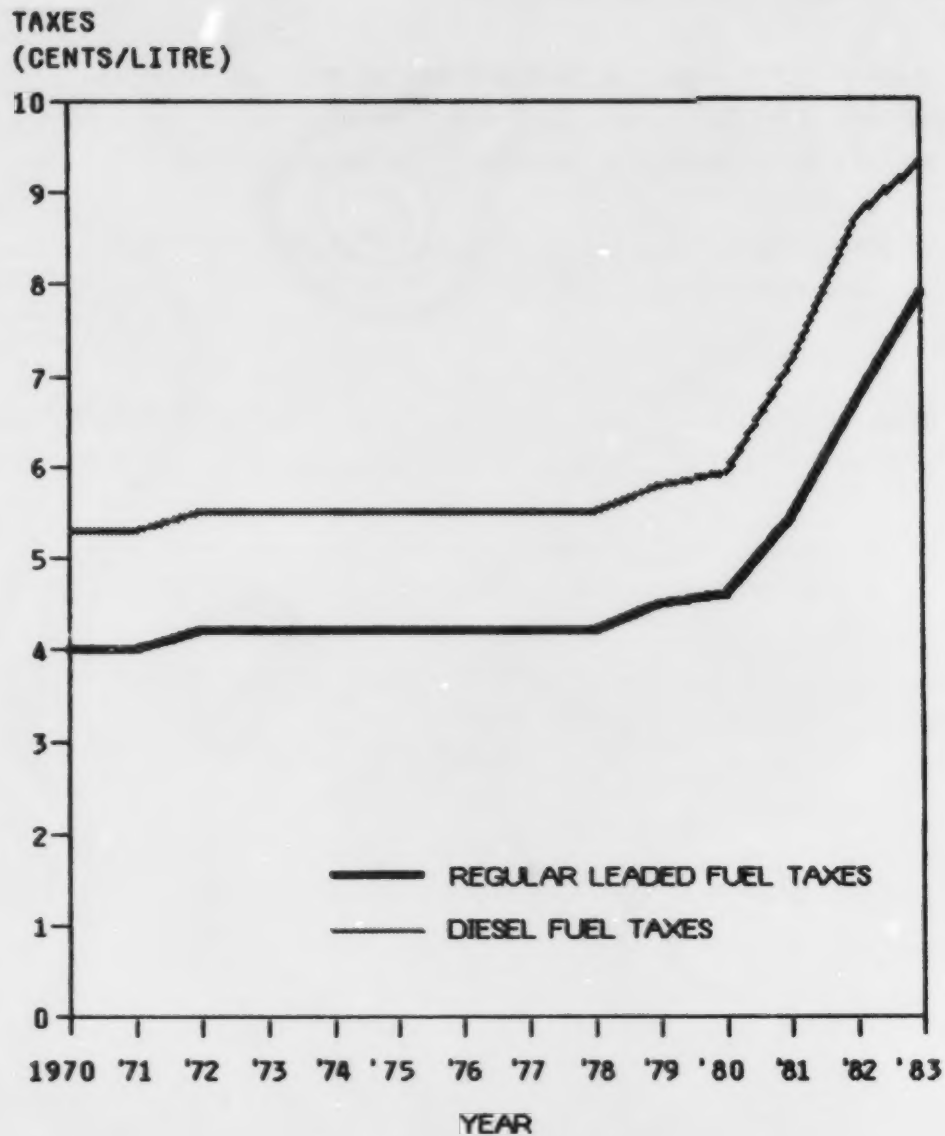
1.16/ Ontario Government Fuel Taxes, Regular Leaded Gasoline and Diesel Fuel, 1970-1984

During the mid-1970s, when motor gasoline and diesel fuel prices were increasing rapidly, the Ontario government fuel taxes remained stable. When the ad valorem fuel tax rate (the fuel tax charged is proportional to the fuel price and is adjusted quarterly; 20% for motor gasoline and 27% for diesel fuel) was introduced in 1980, fuel taxes increased at the same rate as retail fuel prices. Although not included in these statistics, the diesel fuel tax decreased slightly at the beginning of 1984 while regular leaded gasoline taxes increased slightly.

Table 1.16/ Ontario Government Fuel Taxes, Regular Leaded Gasoline and Diesel Fuel, 1970-1984

YEAR	REGULAR LEADED GASOLINE TAXES (cents/litre)	DIESEL FUEL TAXES (cents/litre)
1970	4.0	5.3
1971	4.0	5.3
1972	4.2	5.5
1973	4.2	5.5
1974	4.2	5.5
1975	4.2	5.5
1976	4.2	5.5
1977	4.2	5.5
1978	4.2	5.5
1979	4.5	5.8
1980	4.6	5.9
1981	5.4	7.1
1982	6.7	8.7
1983	7.9	9.3

Sources: Ministry of Revenue and Ministry of Treasury and Economics



Sources : Ministry of Revenue and Ministry of Treasury and Economics

Figure 1.16/ Ontario Government Fuel Taxes, Regular Leaded Gasoline and Diesel Fuel, Ontario, 1970-1983

1.17/ Number of Registered Motor Vehicles in Relation to the Number of Gasoline Outlets, Ontario, 1970-1982

Since 1970, there has been a decline in the number of motor gasoline refuelling stations, from 13 000 to 8 200 (a decline of 38%). A 74% increase in the number of registered motor vehicles occurred since 1970.

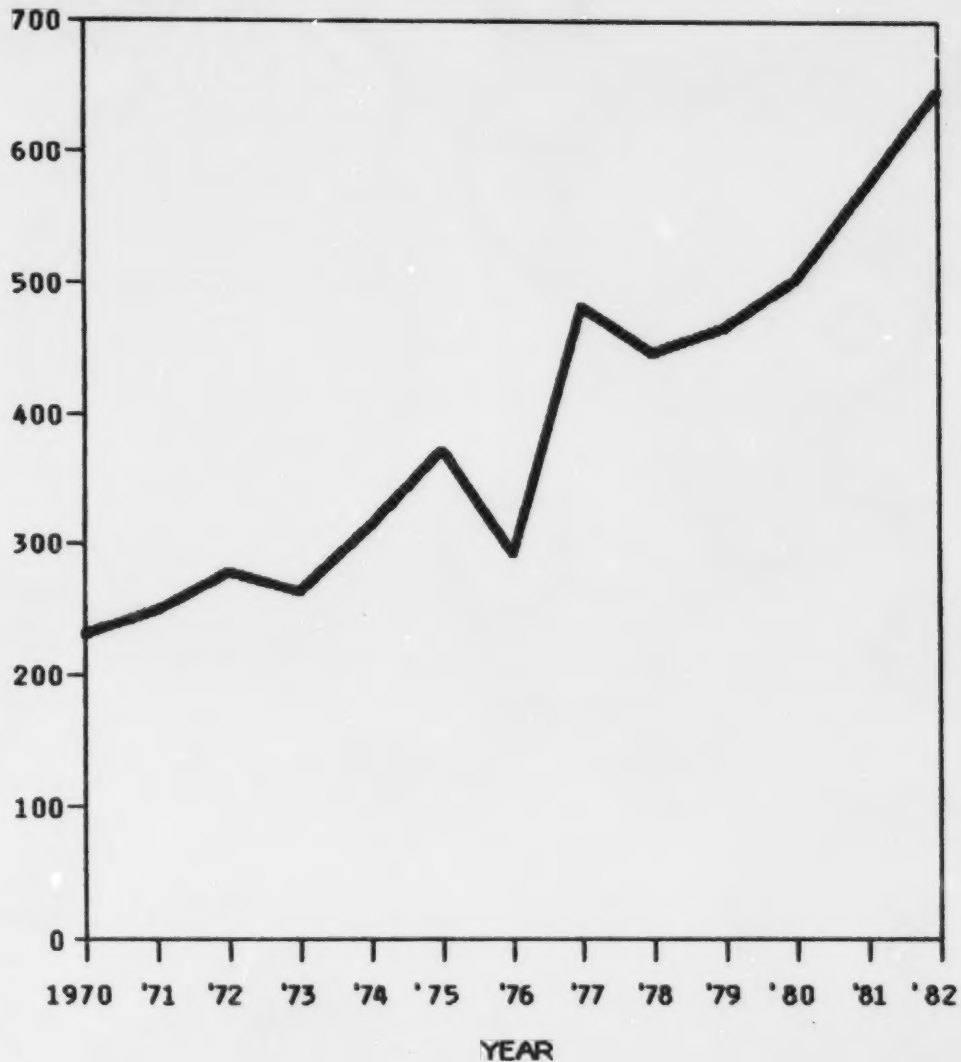
These two diverging patterns have led to an increase of 180% for the number of cars per refuelling station.

Table 1.17/ Number of Registered Motor Vehicles in Relation to the Number of Gasoline Outlets, Ontario, 1970-1982

YEAR	NUMBER OF GASOLINE OUTLETS	MOTOR VEHICLES (thousands)	NO. OF VEHICLES PER OUTLET
1970	13 206	3 048	231
1971	13 351	3 328	249
1972	12 190	3 386	278
1973	13 566	3 583	264
1974	11 838	3 743	316
1975	10 500	3 912	372
1976	14 000	4 090	292
1977	9 000	4 340	482
1978	10 000	4 475	447
1979	10 000	4 639	464
1980	10 000	5 022	502
1981	8 816	5 051	573
1982	8 202	5 295	646

Sources: Ministry of Transportation and Communications and Statistics Canada (53-219)

**NUMBER OF
MOTOR VEHICLES/
GASOLINE OUTLET**



*Sources : Ministry of Transportation and Communications
and Statistics Canada (53-219)*

**Figure 1.17/ Number of Registered Motor Vehicles in Relation to the
Number of Gasoline Outlets, Ontario, 1970-1982**

SECTION TWO:

HIGHWAY MODES



2.1/ AUTOMOBILES

2.1.1/ Number of Registered Passenger Vehicles, Ontario, 1970-1982

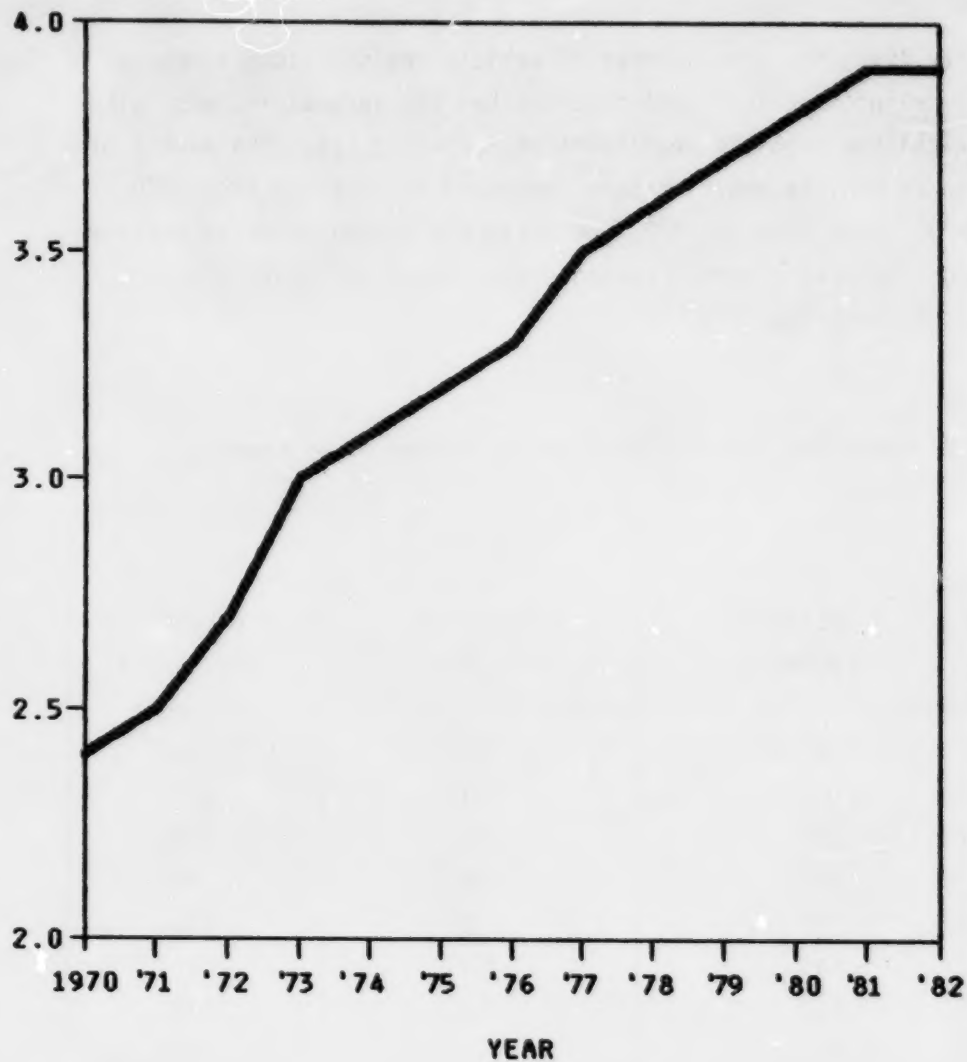
The number of passenger automobiles registered in Ontario has increased annually from 1970 to the present (2.4 million in 1970 to 3.9 million in 1982). This represents a 63.2% increase in the number of automobiles. Given this large increase in the automobile stock, it is not surprising that motor gasoline consumption has also increased by a large proportion. However, in more recent years, the rate of increase of vehicles has declined indicating a decline in the rate of future increases in motor gasoline consumption.

Table 2.1.1/ Number of Registered Passenger Vehicles, Ontario,
1970-1982

YEAR	NUMBER OF VEHICLES (thousands)
1970	2376
1971	2497
1972	2662
1973	3002
1974	3111
1975	3225
1976	3342
1977	3490
1978	3630
1979	3725
1980	3794
1981	3867
1982	3879

Source: Ministry of Transportation and Communications

**REGISTERED
VEHICLES
(MILLIONS)**



Source : Ministry of Transportation and Communications

NOTE: Includes any automobile or light truck not registered as a commercial vehicle.

Figure 2.1.1/ Number of Registered Passenger Vehicles, Ontario, 1970-1982

**2.1.2/ Passenger Car Registrations by Number of Cylinders, Ontario,
1970-1982**

From 1970 to 1982, the total number of vehicle registrations increased by 62%. Four-cylinder vehicle registrations had the largest increase with 233%. Six-cylinder vehicle registrations increased 11%. The number of eight-cylinder vehicle registrations continued to increase from 1970 through 1979. From 1979 to 1982, the pattern has been to drive smaller and more fuel efficient cars. Consequently, there are fewer eight-cylinder vehicles being sold.

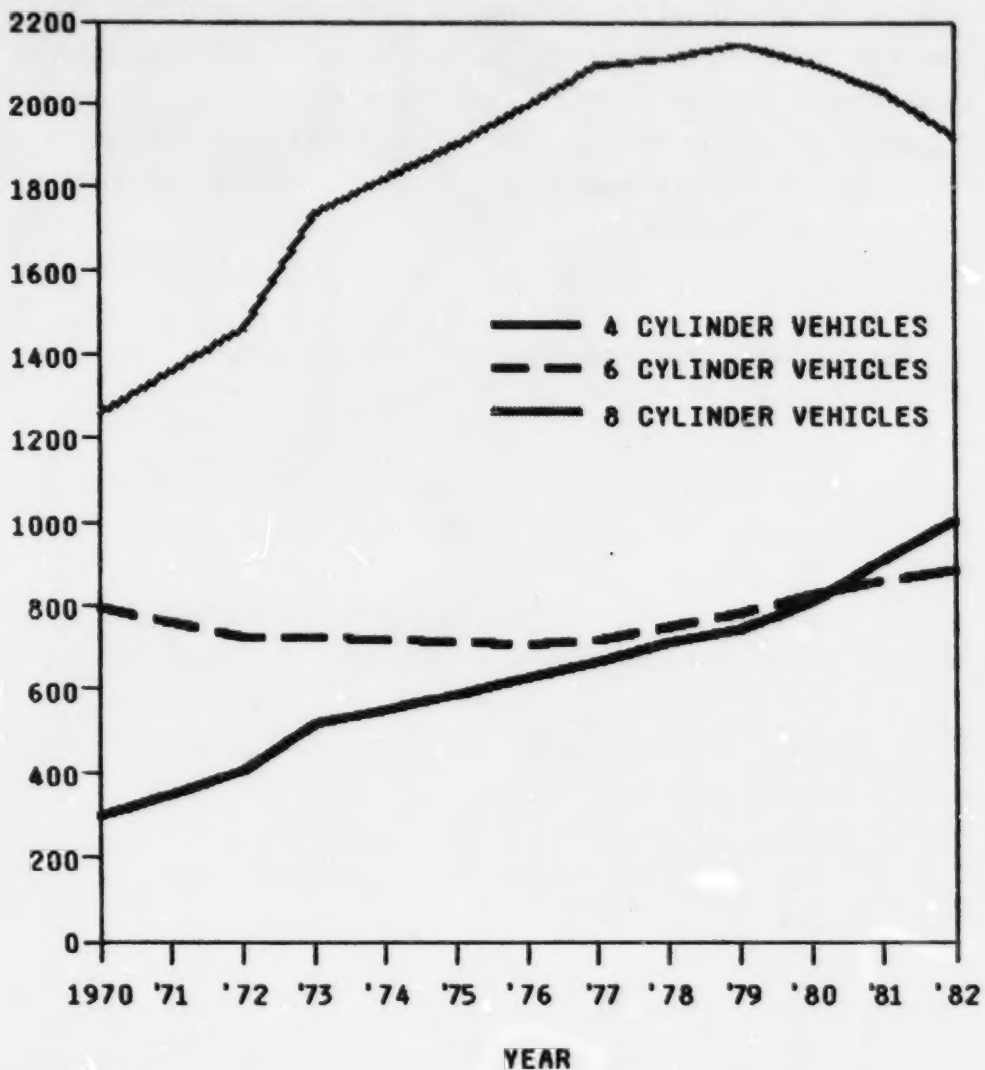
**Table 2.1.2/ Passenger Car Registrations by Number of Cylinders,
Ontario, 1970-1982**

YEAR	4 CYLINDERS (thousands)	6 CYLINDERS (thousands)	8 CYLINDERS* (thousands)
1970	303	799	1266
1971	355	761	1372
1972	409	724	1474
1973	520	728	1741
1974	556	722	1829
1975	593	714	1913
1976	632	706	2000
1977	669	722	2094
1978	714	750	2119
1979	748	783	2149
1980	809	828	2103
1981	915	864	2039
1982	1009	889	1931

* NOTE: Includes engines 6.5 L or larger.

Source: Ministry of Transportation and Communications

REGISTRATIONS
(THOUSANDS)



Source : Ministry of Transportation and Communications

Figure 2.1.2/ Passenger Car Registrations by Number of Cylinders,
Ontario, 1970-1982

2.1.3/ New Car Sales, North American and Imported, Ontario, 1975-1983

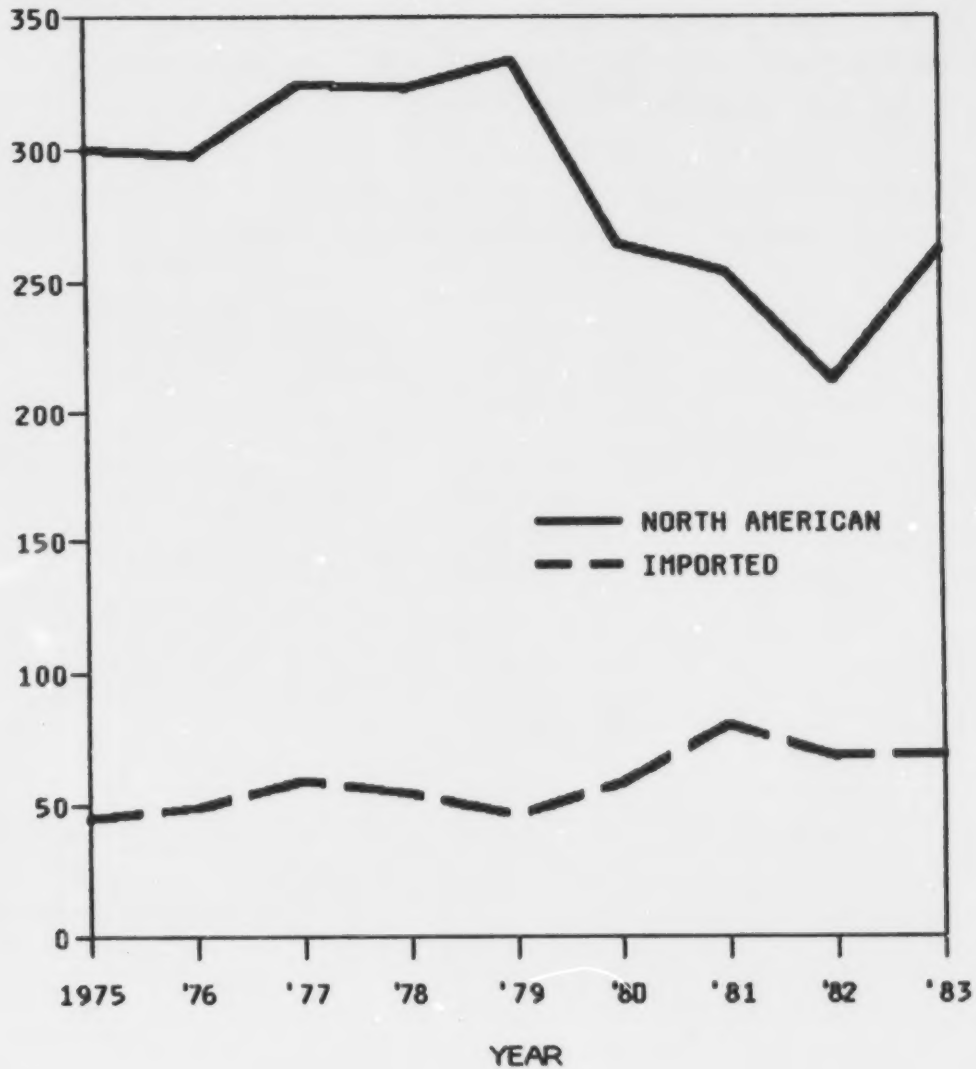
For the first time since 1979, new car sales increased by 18% in 1983. This increase can be attributed to improvements in economic conditions. In 1983, domestic car sales increased by 23% over sales in 1982. Imported car sales increased by 23% over sales in 1982. Imported car sales, however, increased by only 2% in 1983. The enhanced fuel efficiency of North American cars contributed greatly to the dramatic increase of North American car sales over imported car sales.

Table 2.1.3/ New Car Sales, North American and Imported, Ontario, 1975-1983

YEAR	NORTH AMERICAN (thousands)	IMPORTED (thousands)	TOTAL (thousands)
1975	300	45	345
1976	298	49	348
1977	324	59	383
1978	323	54	377
1979	334	46	381
1980	264	58	322
1981	254	81	335
1982	212	69	281
1983	262	70	332

Source: R.L. Polk & Co. Ltd.

NUMBER
OF CARS
(THOUSANDS)



Source : R.L. Polk & Co. Ltd.

Figure 2.1.3/ New Car Sales, North American and Imported, Ontario,
1975-1983

2.1.4/ Total Number of Licensed Drivers, Ontario, 1970-1982

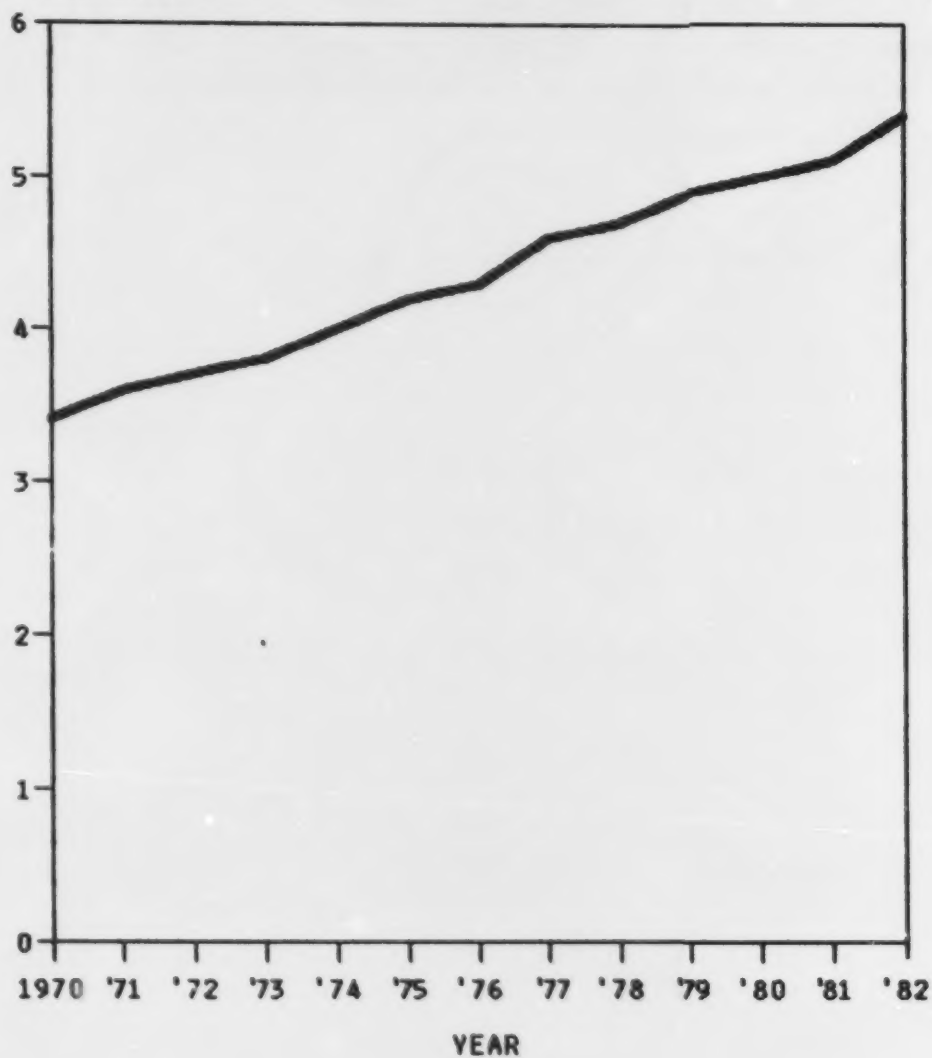
From 1970 to 1982, the total number of licensed drivers in Ontario increased steadily from 3.4 million to nearly 5.4 million, an increase of almost 60% in the total number of licensed drivers in Ontario.

Table 2.1.4/ Total Number of Licensed Drivers, Ontario, 1970-1982

YEAR	NUMBER OF LICENSED DRIVERS (thousands)
1970	3443
1971	3563
1972	3689
1973	3842
1974	3973
1975	4161
1976	4316
1977	4563
1978	4726
1979	4859
1980	4994
1981	5123
1982	5371

Source: Statistics Canada (53-219)

NUMBER OF
DRIVERS
(MILLIONS)



Source : Statistics Canada (53-219)

Figure 2.1.4/ Total Number of Licensed Drivers, Ontario, 1970-1982

2.1.5/ Number of Cars Per Licensed Driver, Ontario, 1970-1982

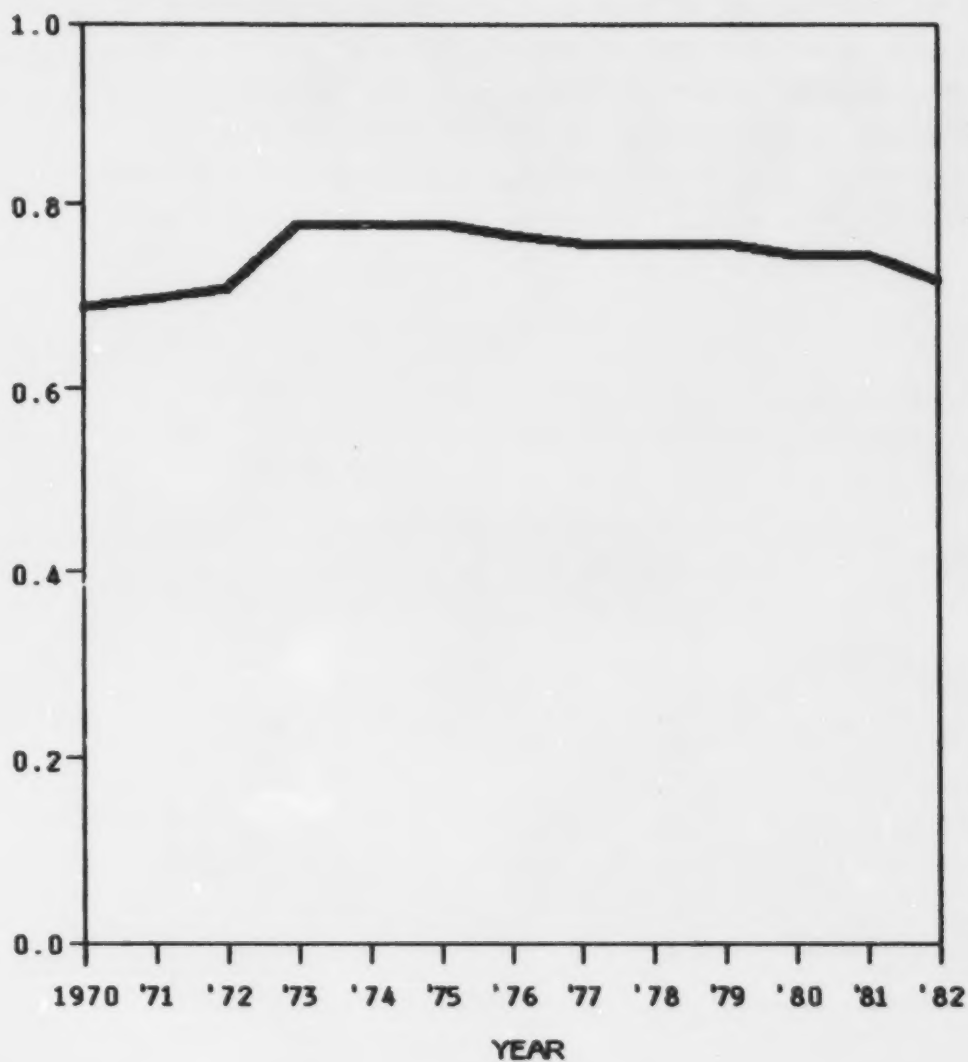
Since 1973, the number of cars per licensed driver has steadily declined. Although this decrease indicates that annual kilometres per vehicle should increase, the annual travel per vehicle has actually decreased from 1975. Therefore, more drivers are travelling less, in relatively fewer cars with more passengers.

Table 2.1.5/ Number of Cars Per Licensed Driver, Ontario, 1970-1982

YEAR	PASSENGER VEHICLES (thousands)	LICENSED DRIVERS (thousands)	CARS/DRIVER
1970	2376	3443	0.69
1971	2497	3563	0.70
1972	2612	3689	0.71
1973	3002	3842	0.78
1974	3111	3973	0.78
1975	3225	4161	0.78
1976	3342	4316	0.77
1977	3490	4563	0.76
1978	3597	4726	0.76
1979	3692	4859	0.76
1980	3752	4994	0.75
1981	3831	5123	0.75
1982	3843	5371	0.72

Sources: Ministry of Transportation and Communications and Statistics Canada (53-219)

VEHICLES/LICENSED
DRIVER



*Source : Ministry of Transportation and Communications and
Statistics Canada (53-219)*

Figure 2.1.5/ Number of Cars Per Licensed Driver, Ontario, 1970-1982

**2.1.6/ Average Fuel Efficiency of North American and Imported
Automobiles, Ontario, 1977-1983**

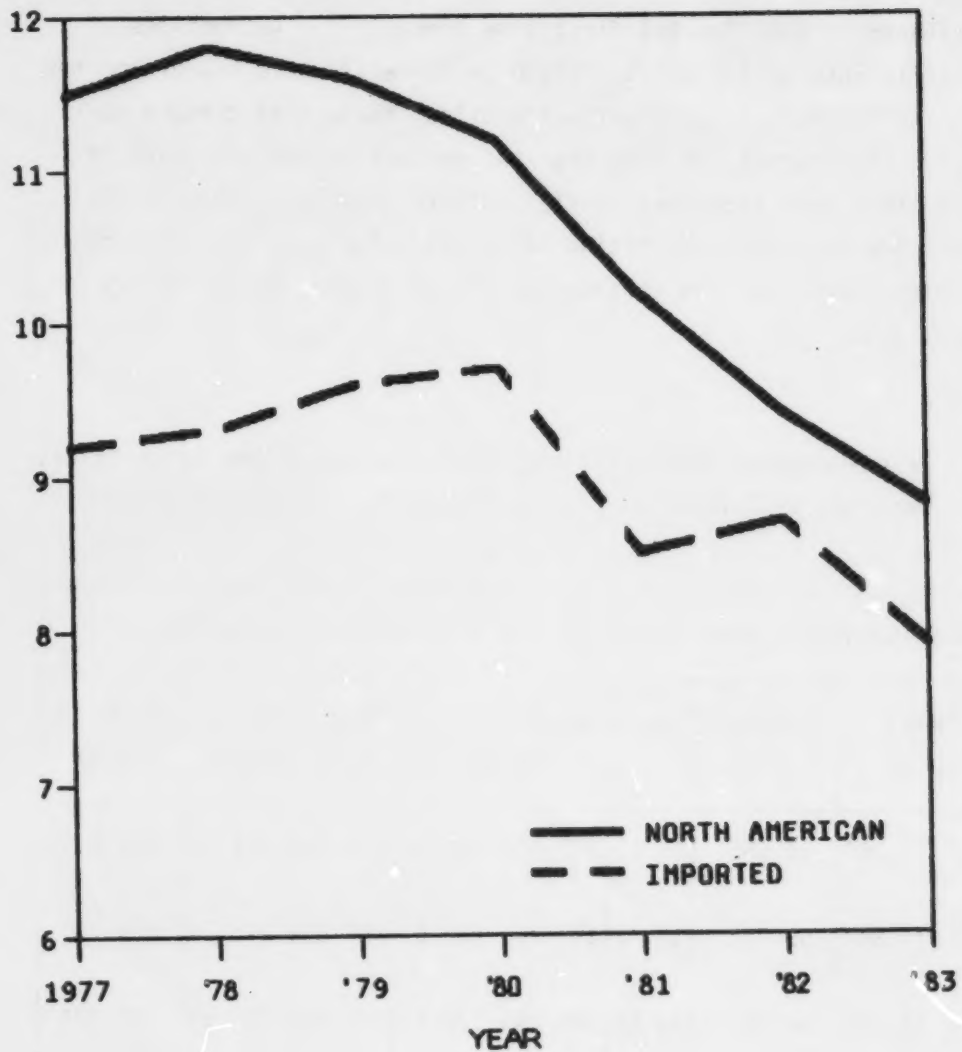
It is well known that the fuel efficiency of imported automobiles has traditionally been better than that of domestically-produced cars. In 1977, the average fuel efficiency of all models in the imported auto fleet was 25% better than the comparable domestic fleet. What is surprising, however, is that in 1983 (model-year of automobiles) this gap has been narrowed to only an 11.4% difference in fuel efficiency between the two fleets.

**Table 2.1.6/ Average Fuel Efficiency of North American and Imported
Automobiles, Ontario, 1977-1983**

YEAR	NORTH AMERICAN (litres/100 km)	IMPORTED (litres/100 km)
1977	11.5	9.2
1978	11.8	9.3
1979	11.6	9.6
1980	11.2	9.7
1981	10.2	8.5
1982	9.4	8.7
1983	8.8	7.9

Source: Transport Canada, Fuel Consumption Guide

**FUEL EFFICIENCY
(LITRES/100 km)**



Source : Transport Canada, Fuel Consumption Guide

**Figure 2.1.6/ Average Fuel Efficiency of North American and Imported
Automobiles, Ontario, 1977-1983**

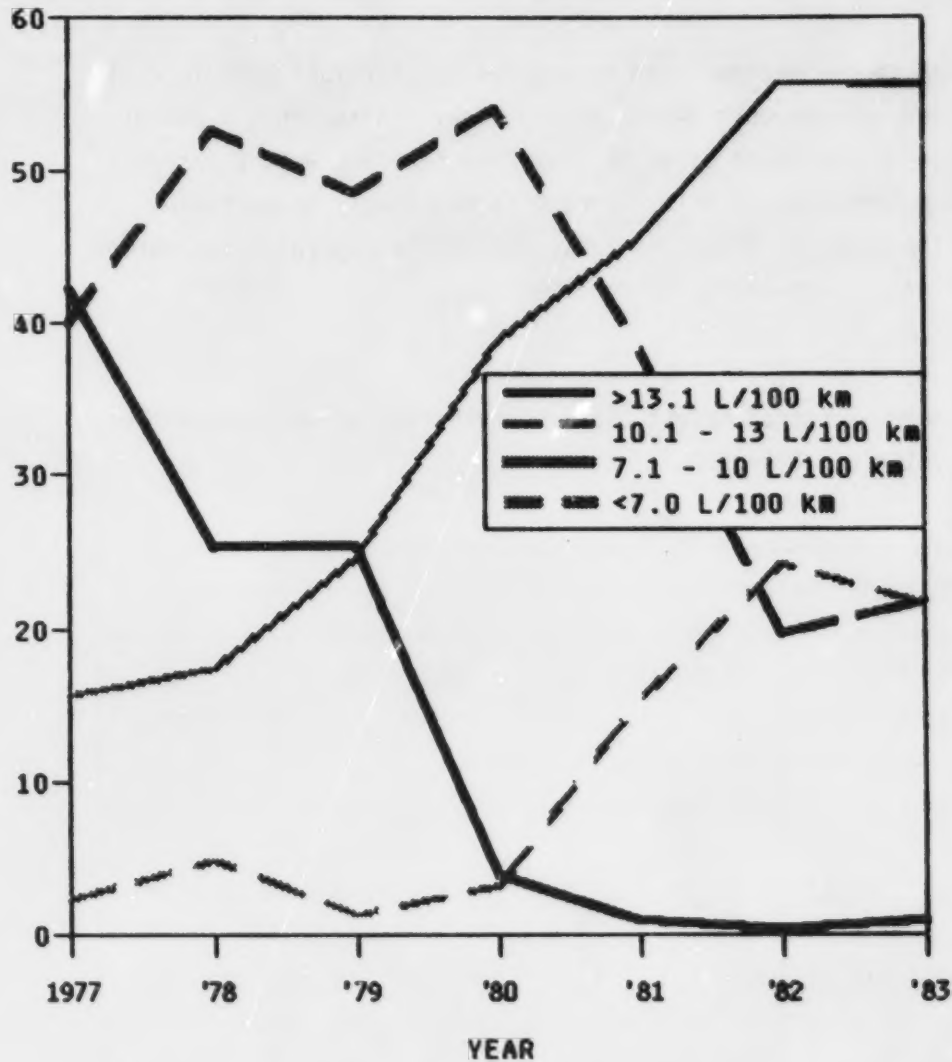
**2.1.7/ Sales-Weighted Fuel Efficiency Distribution of New Automobiles,
Ontario, 1977-1983**

As a result of improved economic conditions, sales in each fuel efficiency category increased in 1983 for the first time since 1979. Automobiles with a fuel efficiency of 7.0 to 10.0 L/100 km currently hold 56% of the new car market. The least fuel efficient automobiles (those that consume more than 13.0 L/100 km) account for less than one percent of new car sales in Ontario. The trend away from fuel inefficient vehicles to relatively fuel efficient vehicles resulted from rising oil prices, the extensive production of fuel efficient vehicles, and enhanced public awareness towards energy resources and costs.

**Table 2.1.7/ Sales-Weighted Fuel Efficiency Distribution of New Automobiles,
Ontario, 1977-1983**

NUMBER OF PASSENGER AUTOMOBILES SOLD AND PERCENTAGE (in parentheses)						
YEAR	LESS THAN 7 L/100 km	7.0 to 10.0 L/100 km	10.1 to 13.0 L/100 km	MORE THAN 13 L/100 km	TOTAL (100%)	
1977	8 331 (2.2%)	59 665 (15.6)	152 464 (40.0)	161 196 (42.2)	381 636	
1978	17 879 (4.8%)	65 282 (17.4)	197 760 (52.6)	94 849 (25.2)	375 770	
1979	4 789 (1.3%)	94 000 (24.6)	186 269 (48.6)	97 326 (25.5)	382 384	
1980	10 178 (3.2%)	125 264 (38.8)	174 432 (54.1)	12 308 (3.8)	322 182	
1981	48 643 (15.3%)	144 284 (45.4)	121 984 (38.4)	2 964 (0.9)	317 875	
1982	63 415 (24.2%)	146 214 (55.8)	51 249 (19.6)	997 (0.4)	261 875	
1983	71 673 (21.6%)	184 658 (55.7)	72 212 (21.8)	3 048 (0.9)	331 830	

**NEW AUTO SALES
(PER CENT OF TOTAL)**



*Sources : R.L. Polk & Co. Ltd. and
Transport Canada, Fuel Consumption Guide*

NOTE: The fuel efficiency ratings provided by Transport Canada are based on laboratory testing conditions and may vary from actual on-road fuel efficiency ratings. These ratings are combined city/highway driving estimates.

**Figure 2.1.7/ Sales-Weighted Fuel Efficiency Distribution of New
Automobiles, Ontario, 1977-1983**

**2.1.8/ Sales-Weighted Weight Class Distribution of New Automobiles,
Ontario, 1975-1983**

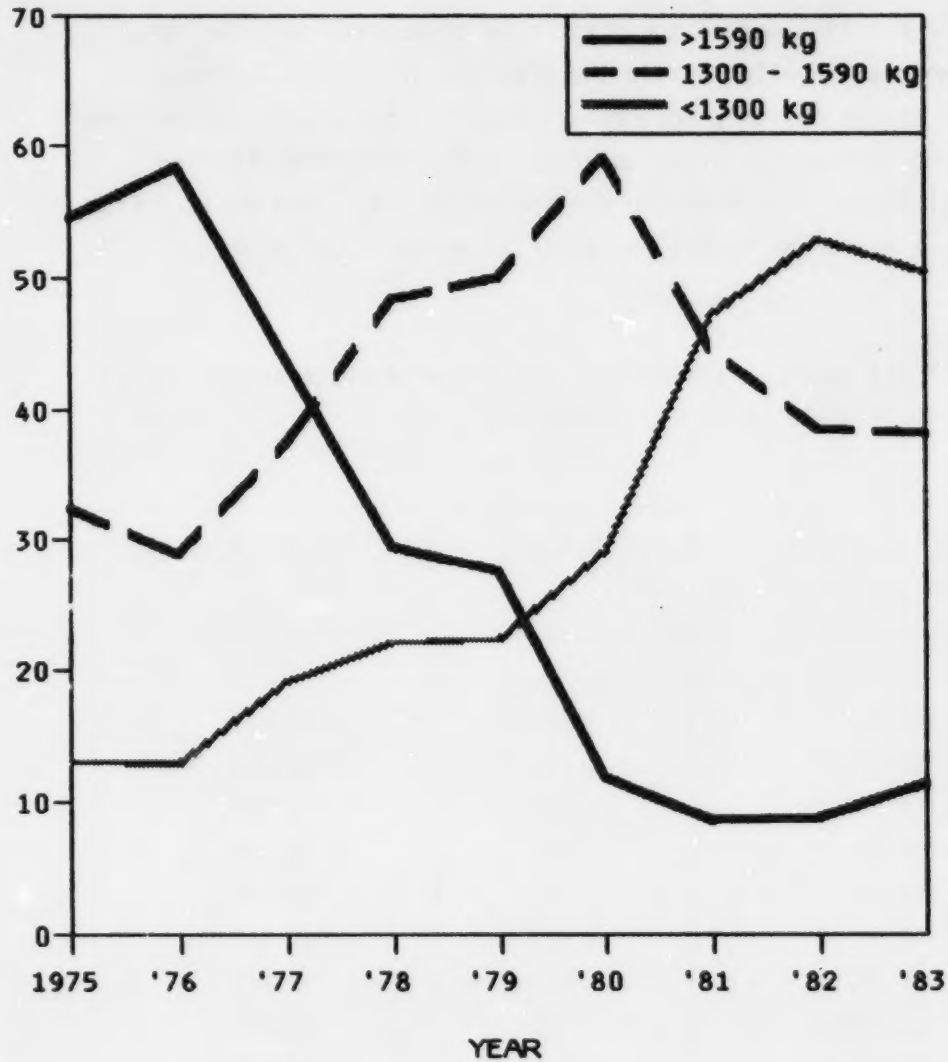
One of the most common methods used to achieve greater fuel efficiency is reduction of the average curb weight of the fleet. Although all weight categories enjoyed increased sales in 1983, the heaviest weight category increased its market share. This increase is not likely to continue. Furthermore, the possibility of the heavy automobile regaining the market share it held in 1976 is extremely doubtful.

**Table 2.1.8/ Sales-Weighted Weight Class Distribution of New Automobiles,
Ontario, 1975-1983**

NUMBER OF PASSENGER AUTOMOBILES AND PERCENTAGE (in parentheses)				
YEAR	LESS THAN 1300 kg	1130-1590 kg	MORE THAN 1590 kg	TOTAL (100%)
1975	41 857 (13.1)	103 920 (32.4)	174 510 (54.5)	320 287
1976	44 022 (12.8)	99 474 (28.8)	201 441 (58.4)	344 937
1977	62 984 (19.1)	122 810 (37.2)	144 230 (43.7)	330 024
1978	83 045 (22.1)	181 873 (48.4)	110 852 (29.5)	375 770
1979	85 272 (22.3)	191 192 (50.0)	105 920 (27.7)	382 384
1980	93 433 (29.0)	190 410 (59.1)	38 340 (11.9)	322 182
1981	149 498 (47.0)	141 019 (44.4)	27 358 (8.6)	317 875
1982	138 320 (52.8)	100 858 (38.5)	22 697 (8.7)	261 875
1983	167 332 (50.4)	126 590 (38.1)	37 908 (11.4)	331 830

Sources: R.L. Polk & Co. Ltd. and Sanford Evans Motor Vehicle Handbook

**NEW AUTO SALES
(PERCENT OF TOTAL)**



*Sources : R.L. Polk & Co. Ltd. and
Sandford Evans Motor Vehicle Handbook*

**Figure 2.1.8/ Sales-Weighted Weight Class Distribution of New
Automobiles, Ontario, 1975-1983**

**2.1.9/ Total Vehicle-Kilometres Travelled vs Average Annual Travel
Per Vehicle, Ontario, 1970-1982**

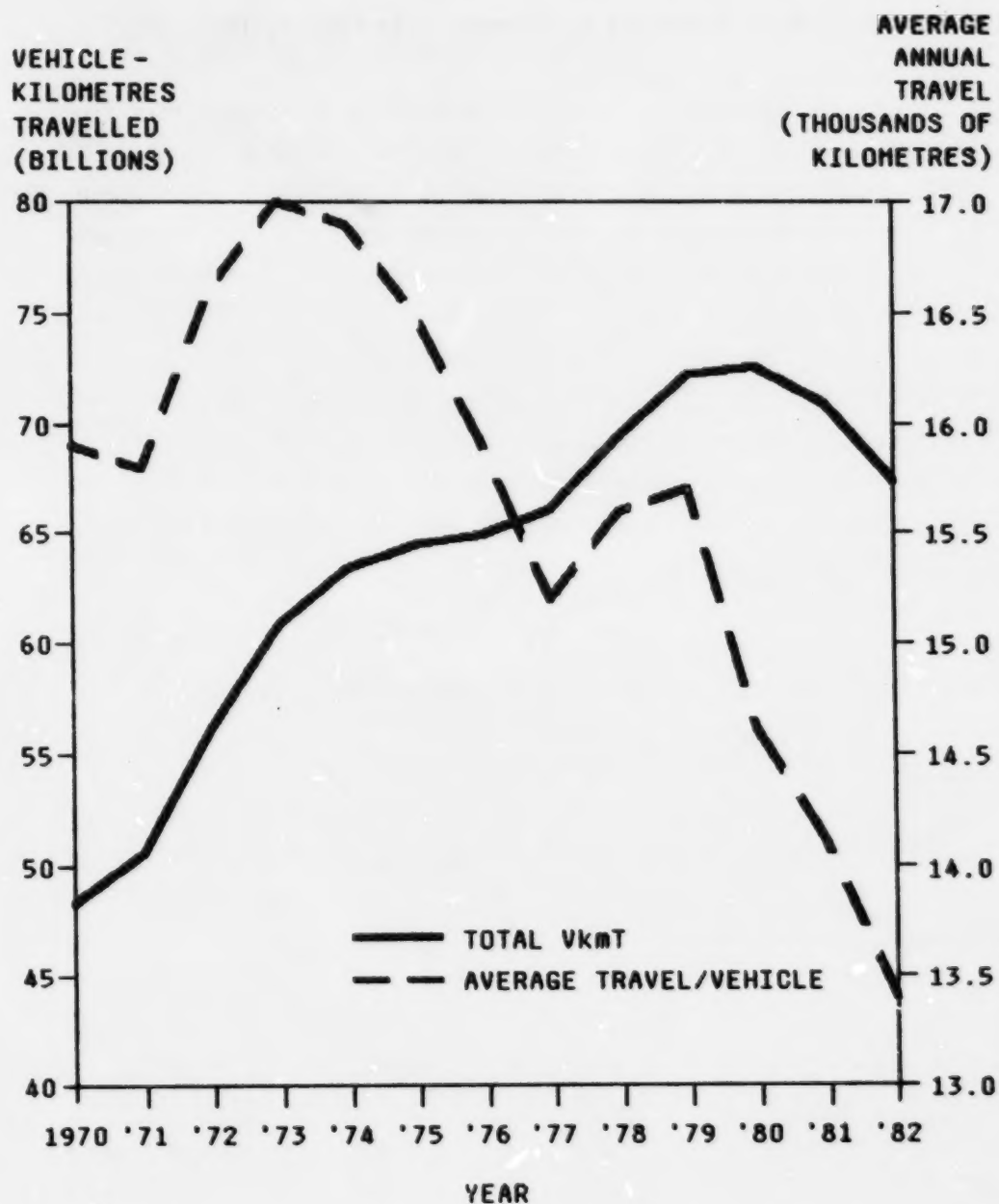
The years 1981 and 1982 marked the first time since 1970 that the total vehicle-kilometres travelled within the province of Ontario declined. Although this change has only occurred in the last two years, the decline could have been forecast to occur as early as the mid-1970s when the average travel per vehicle began to decline by significant amounts. From 1974 to 1982, the average travel per vehicle decreased by 20.8%.

**Table 2.1.9/ Total Vehicle-Kilometres Travelled vs Average Annual Travel
Per Vehicle, Ontario, 1970-1982**

YEAR	TOTAL VEHICLE- KILOMETRES TRAVELLED (millions)	TOTAL NUMBER OF VEHICLES (thousands)	AVERAGE ANNUAL TRAVEL PER VEHICLE (kilometres)
1970	48 367.1	3 048	15 871
1971	50 566.7	3 210	15 754
1972	56 132.1	3 387	16 575
1973	60 812.2	3 583	16 971
1974	63 434.1	3 743	16 948
1975	64 422.6	3 912	16 469
1976	64 947.5	4 090	15 880
1977	66 190.3	4 340	15 249
1978	69 317.0	4 442	15 604
1979	72 161.4	4 606	15 668
1980	72 491.4	4 980	14 556
1981	70 906.0	5 015	14 140
1982	67 360.7*	5 018	13 425

* NOTE: The figures for 1982 are estimated at 5% lower than 1981.

Source: Ministry of Transportation and Communications



Source : Ministry of Transportation and Communications

NOTE: The figures for 1982 are estimated at 5% lower than 1981.

Figure 2.1.9/ Total Vehicle-Kilometres Travelled vs Average Annual Travel Per Vehicle, Ontario, 1970-1982

2.1.10/ Average Cost of Operating an Automobile in Canada, 1978-1983

The total costs of operating an "average" automobile in Ontario rose from \$2400 in 1978 to \$4700 in 1983, an increase of 96%. Since 1978, the fixed costs associated with the operation of an automobile have increased by 128%. The largest increase in these costs occurred in 1983. Improvements in fuel efficiency over this time period have contributed to the lower costs of gasoline and oil.

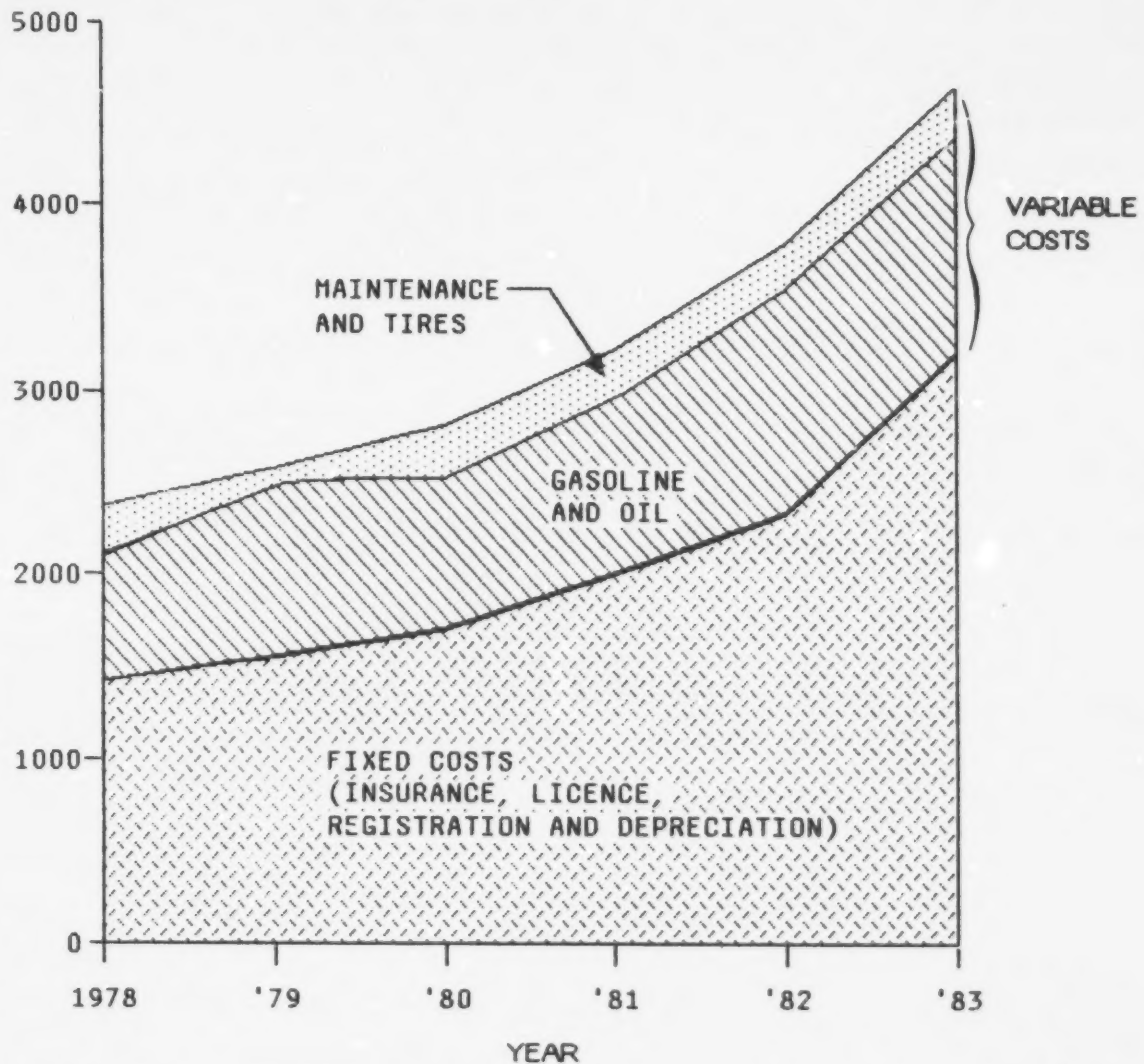
NOTE: Variable items are directly related to the number of miles driven, how hard the car is used, and how much is spent on service and repair. Fixed costs, though they may vary from car to car and place to place, are normally beyond the control of the motorist and change little with the amount and type of driving.

Table 2.1.10/ Average Cost of Operating an Automobile in Canada,
1978-1983

YEAR	TOTAL COST	FIXED COST	VARIABLE COST	GASOLINE AND OIL
1978	\$2 371	\$1 405	\$ 965	\$ 691.50
1979	2 571	1 531	1 041	955.50
1980	2 810	1 694	1 116	840.00
1981	3 221	1 990	1 231	955.50
1982	3 783	2 329	1 454	1 209.00
1983	4 653	3 208	1 445	1 183.20

Source: Canadian Automobile Association

AUTOMOBILE
OPERATING
COSTS (\$)



Source : Canadian Automobile Association

NOTE: The above figures are a breakdown of the national average cost figures by Runzheimer and Company. Although the test car varies from year to year, the selected car is considered to be an average size car equipped with standard accessories.

Figure 2.1.10/ Average Cost of Operating an Automobile in Canada,
1978-1983

[illegible]

2.2/ TRUCKS

2.2.1/ Commercial Truck/Tractor Registrations, Ontario, 1970-1982

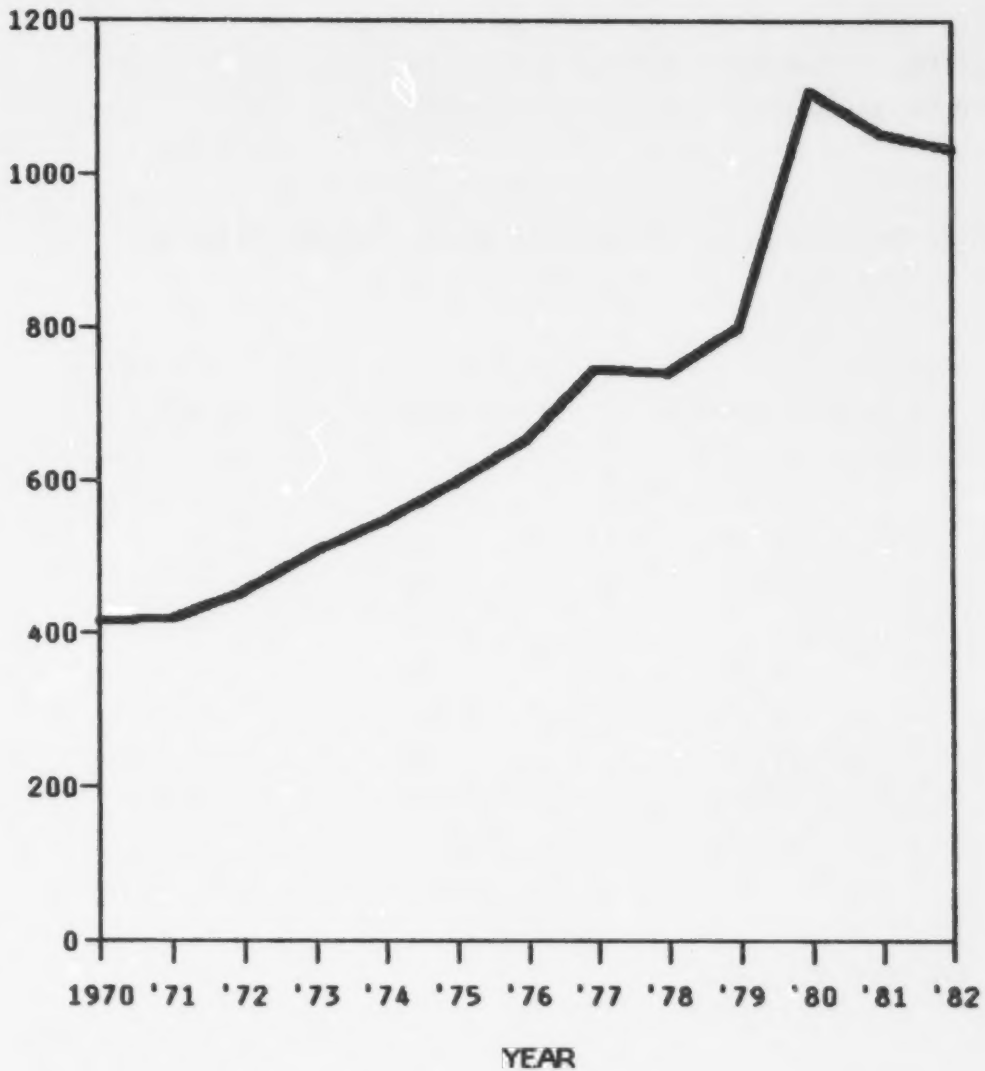
From 1970 to 1980, the total number of registered commercial trucks increased 168%. However, poor economic conditions in the past three years have led to an abrupt change in this pattern. The decline of truck registrations, since 1980, partly resulted from fleet owners operating fewer trucks due to economic restraints.

Table 2.2.1/ Commercial Truck/Tractor Registrations, Ontario, 1970-1982

YEAR	NUMBER OF REGISTRATIONS (thousands)
1970	413
1971	418
1972	452
1973	505
1974	549
1975	598
1976	651
1977	747
1978	739
1979	801
1980	1108
1981	1054
1982	1031

Source: Ministry of Transportation and Communications

**REGISTRATIONS
(THOUSANDS)**



Source : Ministry of Transportation and Communications

Figure 2.2.1/ Commercial Truck/Tractor Registrations, Ontario, 1970-1982

**2.2.2/ New Truck Sales, North American and Imported, Ontario,
1975-1983**

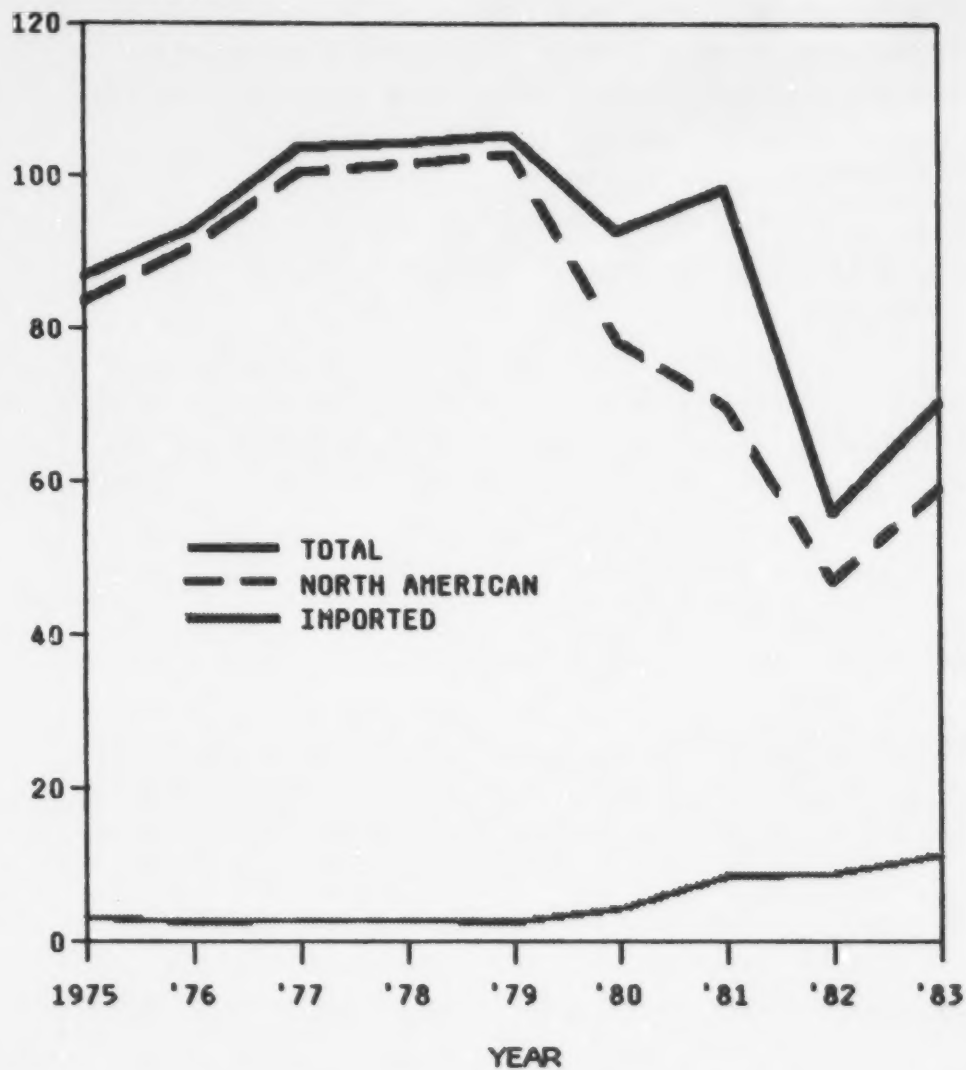
After three years of decline, new truck sales increased 26% in 1983. This increase, in both North American and imported truck sales, can be attributed to recent improvements in the economy.

**Table 2.2.2/ New Truck Sales, North American and Imported, Ontario,
1975-1983**

YEAR	NORTH AMERICAN	IMPORTED	TOTAL
1975	83 472	3 064	86 536
1976	90 647	2 462	93 109
1977	100 516	2 842	103 358
1978	101 383	2 785	104 168
1979	102 669	2 433	105 102
1980	78 271	4 207	92 478
1981	69 948	8 422	98 370
1982	46 998	8 866	55 864
1983	58 908	11 240	70 148

Source: R.L. Polk & Co. Ltd.

NUMBER
OF TRUCKS
(THOUSANDS)



Source : R.L. Polk & Co. Ltd.

Figure 2.2.2/ New Truck Sales, North American and Imported, Ontario
1975-1983

2.2.3/ Weight Class Distribution of New Truck Sales, Ontario, 1975-1983

After declining for several years, total truck sales increased in 1983, solely due to the large increase (30%) in sales in the lightest weight category. Both middle-weight and heavy-weight truck sales continued to decrease in numbers and as a percentage of total truck sales.

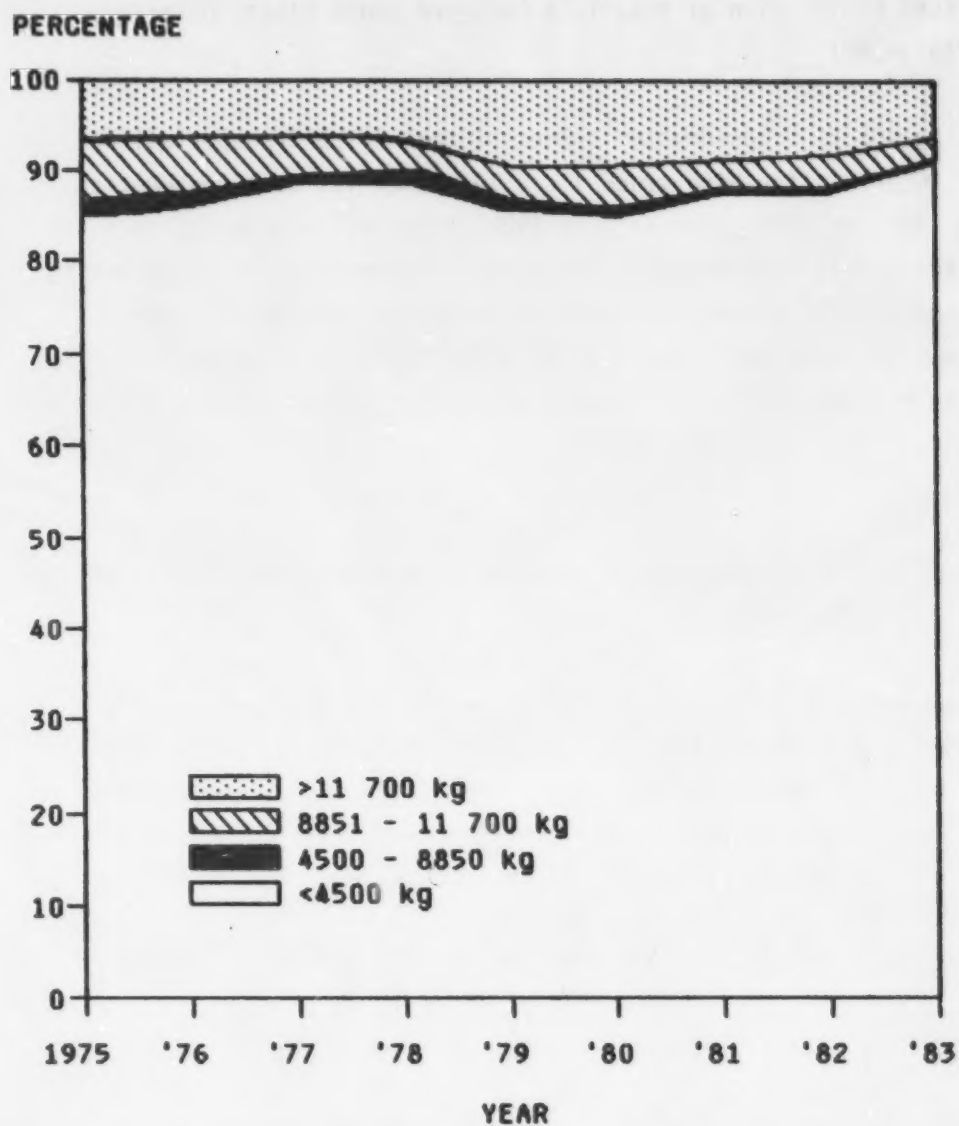
Table 2.2.3/ Weight Class Distribution of New Truck Sales, Ontario, 1975-1983

YEAR	LESS THAN 4500 kg	4500 to 8850 kg	8851 to 11 700 kg	MORE THAN 11 700 kg	TOTAL (100%) ²
1975	73 051 (84.5) ¹	1 565 (1.8)	5 837 (6.8)	6 047 (7.0)	86 500
1976	80 289 (86.2)	1 390 (1.5)	5 399 (5.8)	6 041 (6.5)	93 119
1977	91 466 (88.5)	1 132 (1.1)	4 296 (4.2)	6 474 (6.3)	103 368
1978	92 712 (89.0)	1 030 (1.0)	3 439 (3.3)	6 987 (6.7)	104 168
1979	90 538 (86.1)	1 026 (1.0)	3 823 (3.6)	9 715 (9.2)	105 102
1980	73 833 (85.2)	635 (0.7)	4 055 (4.7)	8 162 (9.4)	86 685
1981	68 522 (87.4)	499 (0.6)	2 589 (3.3)	6 759 (8.6)	78 369
1982	49 069 (87.8)	235 (0.4)	1 971 (3.5)	4 589 (8.2)	55 864
1983	63 893 (91.1)	165 (0.2)	1 684 (2.4)	4 406 (6.3)	70 148

* NOTES: ¹ The numbers in parentheses are the percentage of total market.

² Due to rounding, the percentages may not add up to 100%.

Source: R.L. Polk & Co. Ltd.



Source : R.L. Polk & Co. Ltd.

Figure 2.2.3/ Weight Class Distribution of New Truck Sales, Ontario,
1975-1983

2.2.4/ Fuel Consumption of Ontario's For-Hire Truck Fleet, Ontario, 1975-1981

Reflecting the fuel consumption trends of the entire transportation sector, Ontario's for-hire truck fleet increased its fuel consumption between 1975 and 1980. However, in 1981, there was a dramatic decrease in the total fuel consumption. Since fuel consumption for the trucking sector follows the economic climate very closely, the poor economic conditions may have contributed to this decrease. Similarly, an improving economy would have greater production and more truck traffic, therefore, higher fuel consumption.

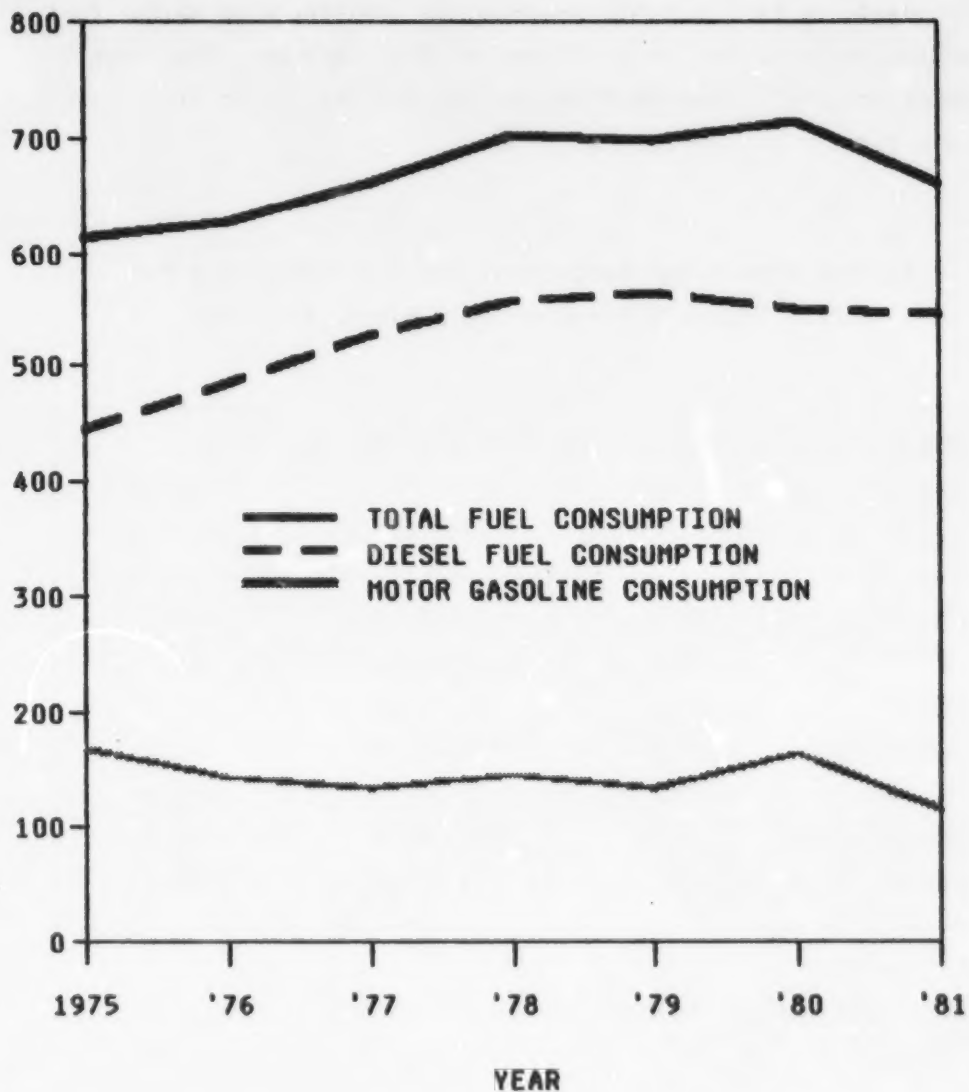
Table 2.2.4/ Fuel Consumption of Ontario's For-Hire Truck Fleet, Ontario,
1975-1981

YEAR	DIESEL FUEL (megalitres)	MOTOR GASOLINE (megalitres)	TOTAL (100%) (megalitres)
1975	445.3 (72.6) ¹	168.4 (27.4)	613.7
1976	483.6 (77.3)	142.3 (22.7)	625.9
1977	527.1 (79.9)	132.7 (20.1)	659.9
1978	556.3 (79.3)	145.5 (20.7)	701.7
1979	563.6 (80.7)	134.4 (19.3)	698.0
1980	549.8 (77.0)	164.5 (23.0)	714.3
1981	546.0 (82.6)	114.8 (17.4)	660.7

¹ NOTE: Figures in parentheses show the percentage of total market.

Source: Statistics Canada (53-222)

**FUEL
CONSUMPTION
(MEGALITRES)**



Source : Statistics Canada (53-222)

**Figure 2.2.4/ Fuel Consumption of Ontario's For-Hire Truck Fleet,
Ontario, 1975-1981**

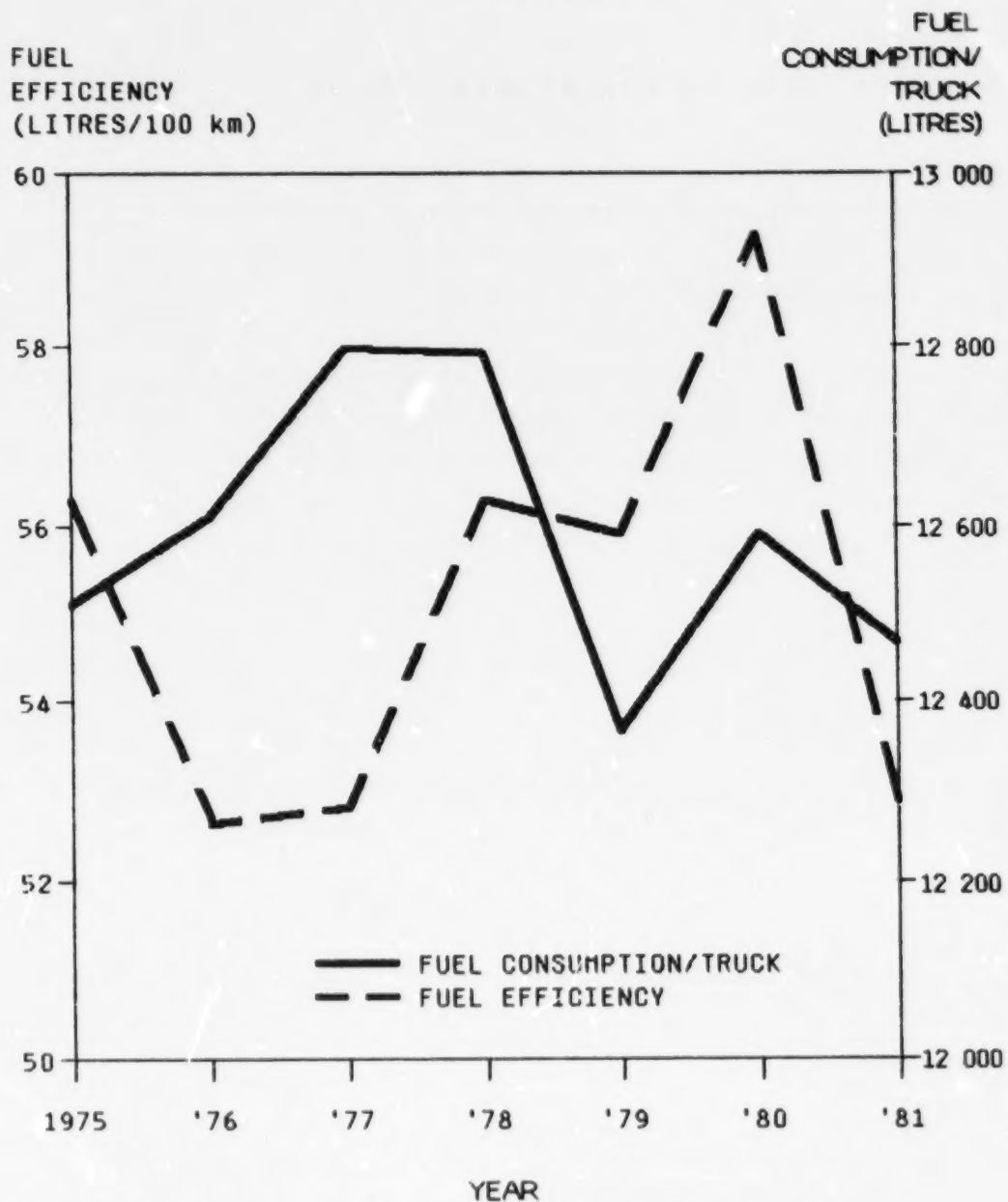
**2.2.5/ Average Annual Fuel Consumption and Fuel Efficiency Per Truck:
Ontario's For-Hire Truck Fleet, 1975-1981**

The smaller fleets in 1976 and 1977 consisted of vehicles with better fuel efficiency than those in the larger fleets of 1975, 1979 and 1980. The contraction of Ontario's for-hire fleet in 1981 had the result of improving the fleet's average fuel efficiency.

**Table 2.2.5/ Average Annual Fuel Consumption and Fuel Efficiency Per
Truck: Ontario's For-Hire Truck Fleet, 1975-1981**

YEAR	NUMBER OF VEHICLES	DISTANCE TRAVELLED (millions of vehicle-km)	FUEL CONSUMPTION PER TRUCK (litres)	FUEL EFFICIENCY (litres/100 km)
1975	49 051	1 090.9	12 511.9	56.3
1976	49 673	1 188.3	12 609.5	52.7
1977	51 556	1 250.2	12 798.7	52.8
1978	54 860	1 247.0	12 791.6	56.3
1979	56 436	1 248.7	12 367.4	55.9
1980	56 737	1 205.2	12 589.6	59.3
1981	52 999	1 248.2	12 466.9	52.9

Source: Statistics Canada (53-222)



Source : Statistics Canada (53-222)

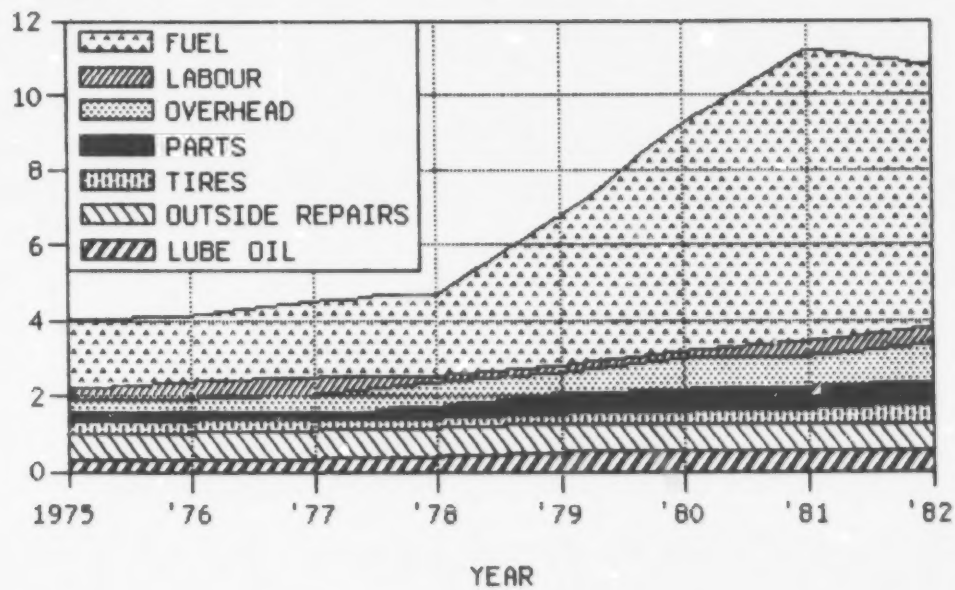
Figure 2.2.5/ Average Annual Fuel Consumption and Fuel Efficiency Per Truck: Ontario's For-Hire Truck Fleet, Ontario, 1975-1981

2.2.6/ Linehaul Costs in Cents Per Kilometre, 1975-1982

Although the actual figures shown in the accompanying graph are American, the Canadian figures, and thus the figures for Ontario, will follow the same trends. The year 1982 represents the first year since 1975 that the costs per kilometre decreased.

The decrease in fuel costs per kilometre reflects the energy conservation measures undertaken in the diesel fuel transportation sector. Costs for oil, repairs, tires, and parts remained virtually constant. Since overhead costs are fixed, the increase in overhead costs per kilometre resulted from the decrease in total kilometres travelled.

LINEHAUL
COSTS
(CENTS/km)



Source : Diesel Equipment Superintendent

Figure 2.2.6/ Linehaul Costs in Cents Per Kilometre, 1975-1982

[illegible]

2.3/ URBAN TR ASIT

**2.3.1/ Urban Transit: Number of Vehicles Owned and/or Leased,
Ontario, 1977-1982**

Of all urban transit vehicles in Ontario, motorized buses account for the largest portion with approximately 75%. This mode of transportation has consistently retained its market share from 1977 to 1982. Subway cars, all of which are located in Metropolitan Toronto, constitute the second largest segment of the total with 13% of the urban transit vehicles in Ontario. The total number of vehicles has increased 17% since 1977.

**Table 2.3.1/ Urban Transit: Number of Vehicles Owned and/or Leased,
Ontario, 1977-1982**

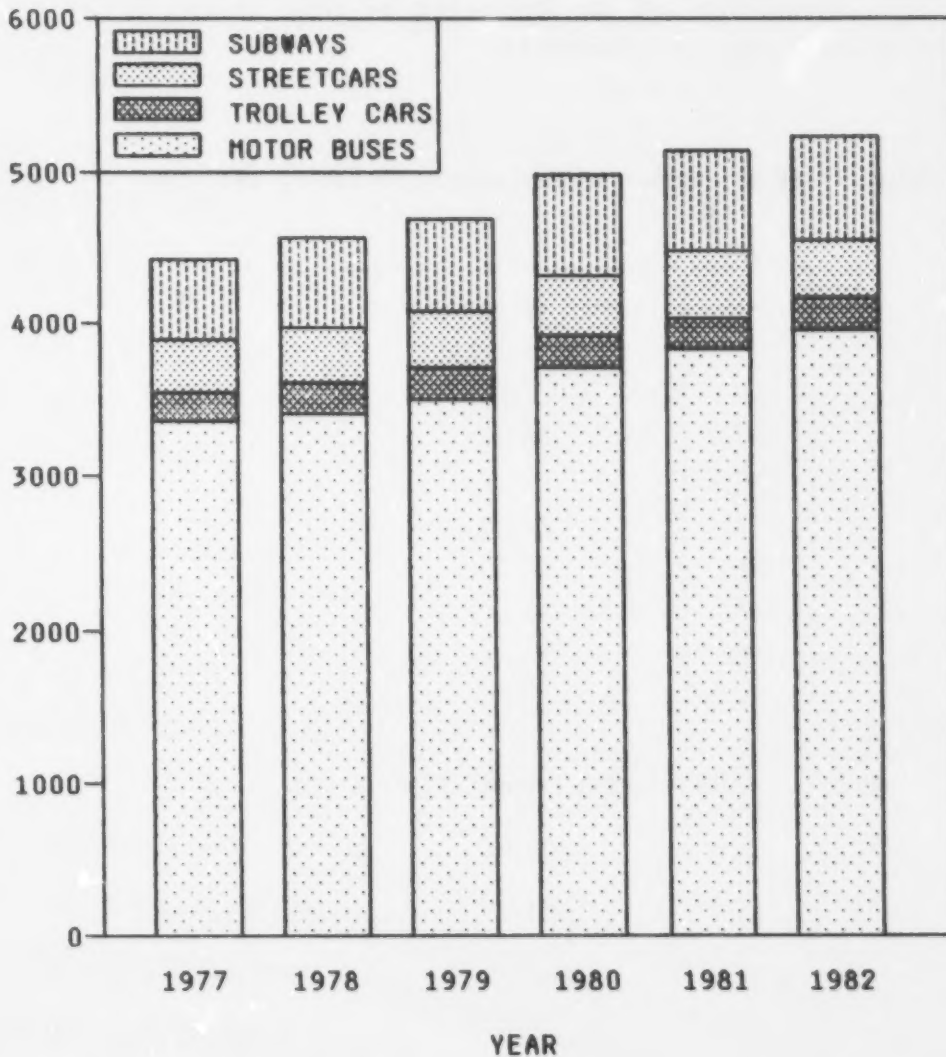
YEAR	MOTOR BUS	TROLLEY COACH	STREET CARS	SUBWAY	TOTAL ¹ (100%)
1977	3347 (75.4) ²	200 (4.5)	356 (8.0)	534 (12.1)	4437
1978	3409 (74.8)	211 (4.6)	349 (7.7)	590 (12.9)	4559
1979	3489 (74.6)	211 (4.5)	361 (7.7)	618 (13.2)	4679
1980	3693 (74.4)	207 (4.1)	401 (8.1)	666 (13.4)	4967
1981	3827 (74.4)	207 (4.0)	441 (8.6)	668 (13.0)	5143
1982	3948 (76.3)	206 (4.0)	371 (7.1)	678 (13.0)	5203

NOTES: ¹ Excludes commuter rail vehicles.

² Numbers in parentheses show percentage of total.

Source: Canadian Urban Transit Association

NUMBER OF
URBAN TRANSIT
VEHICLES OWNED
AND/OR LEASED



Source : Canadian Urban Transit Association

Figure 2.3.1/ Urban Transit: Number of Vehicles Owned and/or Leased,
Ontario, 1977-1982

2.3.2/ Urban Transit: Number of Passengers, Ontario, 1977-1982

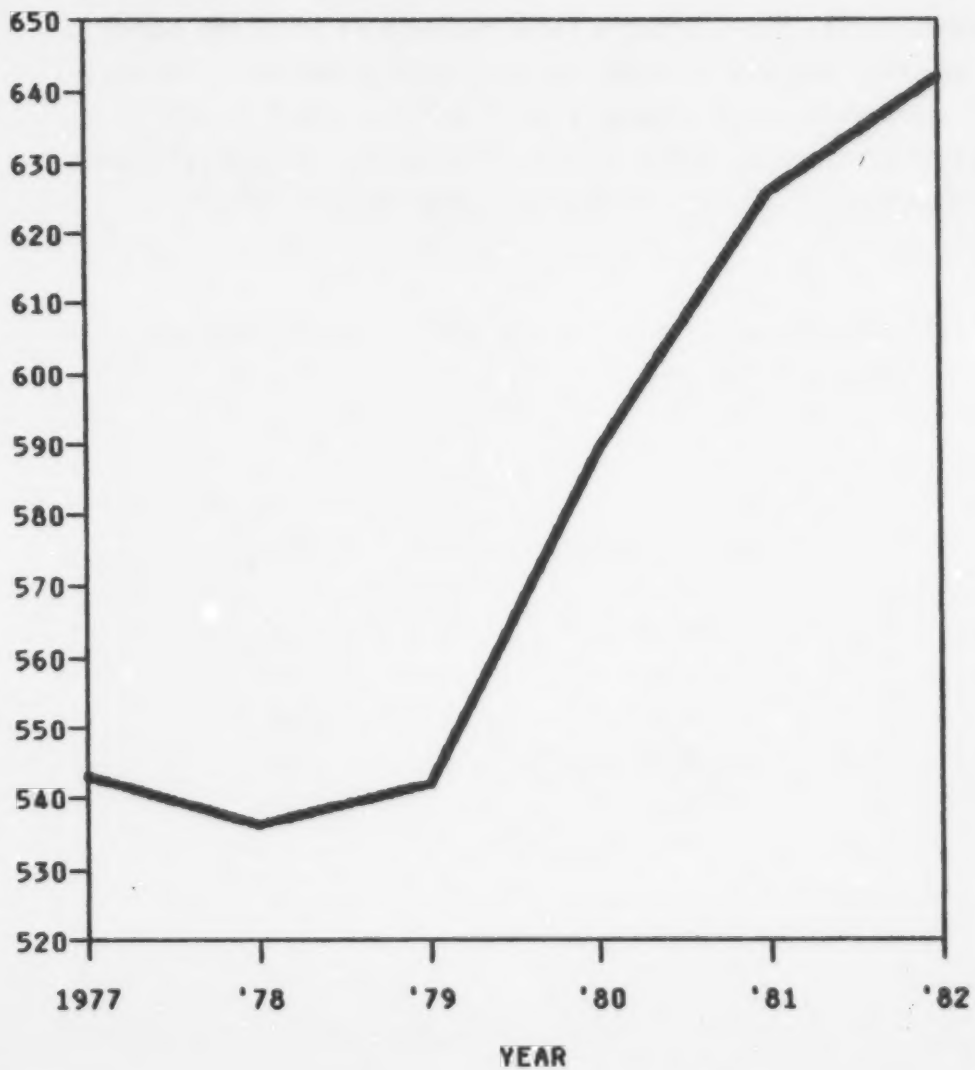
Since 1977, urban transit use has grown by 99 million riders (an 18.2% increase). This increase reflects the public's growing awareness of the necessity of fuel conservation and the feasibility of urban transit as an alternative to driving their own automobiles.

Table 2.3.2/ Urban Transit: Number of Passengers, Ontario, 1977-1982

YEAR	NUMBER OF PASSENGERS (millions)
1977	543.2
1978	536.4
1979	542.0
1980	588.9
1981	625.8
1982	642.0

Source: Canadian Urban Transit Association

PASSENGERS
(MILLIONS)



Source : Canadian Urban Transit Association

Figure 2.3.2/ Urban Transit: Number of Passengers, Ontario, 1977-1982

**2.3.3/ Urban Transit: Gasoline and Diesel Fuel Consumption, Ontario,
1978-1982**

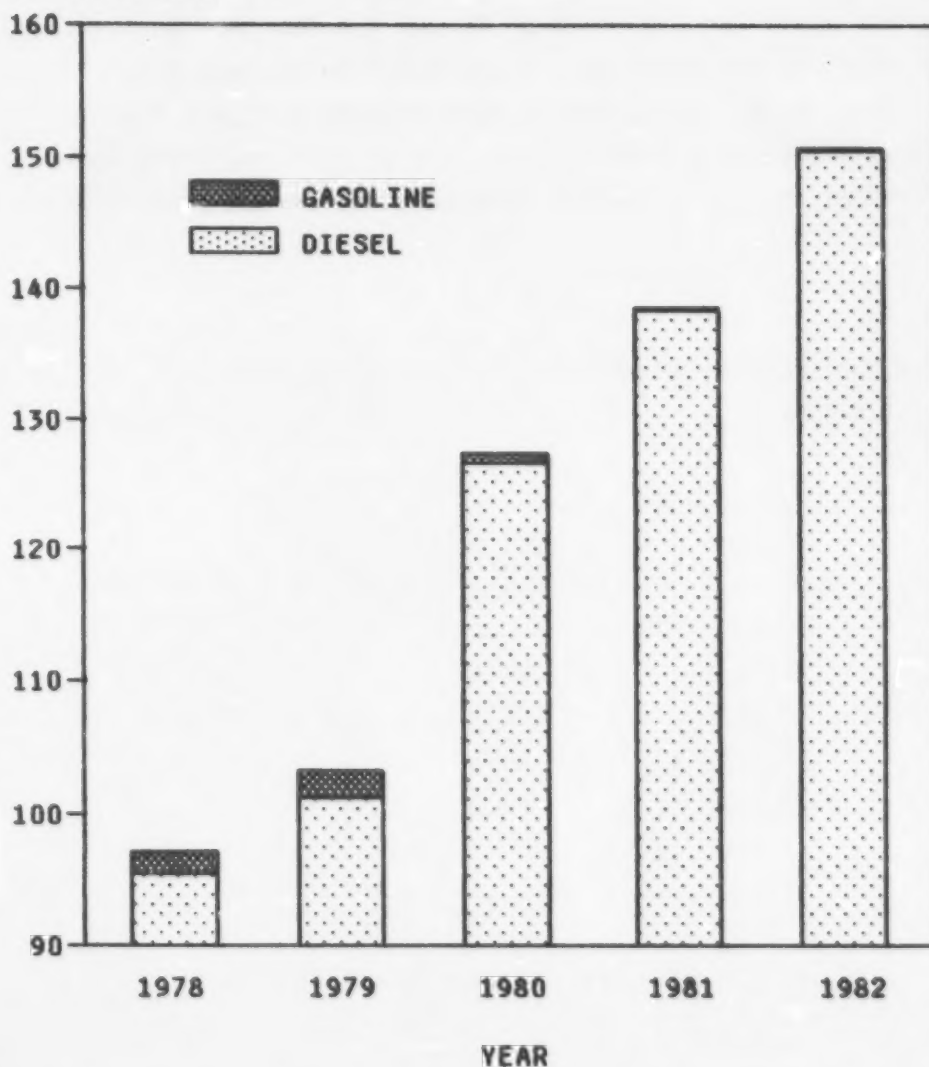
Nearly all (99.8%) of the petroleum products consumed by urban transit is in the form of diesel fuel. After a large decrease in 1981, the number of litres of motor gasoline consumed has continued to decline. However, total fuel consumption has increased from 97 million litres in 1978 to 151 million litres in 1982, which is a 57.7% increase. This escalation in fuel consumption is a result of expanded urban transit service.

**Table 2.3.3/ Urban Transit: Gasoline and Diesel Fuel Consumption,
Ontario, 1978-1982**

YEAR	DIESEL FUEL (megalitres)	MOTOR GASOLINE (megalitres)
1978	95.53	1.55
1979	101.29	2.02
1980	126.60	2.46
1981	138.31	0.29
1982	150.34	0.27

Source: Canadian Urban Transit Association

URBAN
TRANSIT
FUEL
CONSUMPTION
(MEGALITRES)



Source : Canadian Urban Transit Association

**Figure 2.3.3/ Urban Transit: Gasoline and Diesel Fuel Consumption,
Ontario, 1978-1982**

**2.3.4/ Urban Transit: Electric Power Consumption, Ontario,
1978-1982**

Electric power consumption for Ontario's urban transit vehicles, such as trolley cars and subway cars, declined by 9% over the four year period from 1978 to 1981. This decrease can be attributed to improved fuel efficiency in electricity consumption by urban transit vehicles. A slight increase in electric power consumption occurring in 1982 could have been caused by increases in total vehicle-kilometres travelled and passengers carried.

**Table 2.3.4/ Urban Transit: Electric Power Consumption, Ontario,
1978-1982**

YEAR	ELECTRIC POWER (in millions of kWh)
1978	342.6
1979	336.8
1980	311.5
1981	306.3
1982	307.7

Source: Canadian Urban Transit Association

ELECTRIC
POWER
CONSUMPTION
(MILLIONS OF kWh)



Source : Canadian Urban Transit Association

Figure 2.3.4/ Urban Transit: Electric Power Consumption, Ontario,
1978-1982

**2.3.5/ Urban Transit: Total Vehicle-Kilometres Travelled, Ontario,
1977-1982**

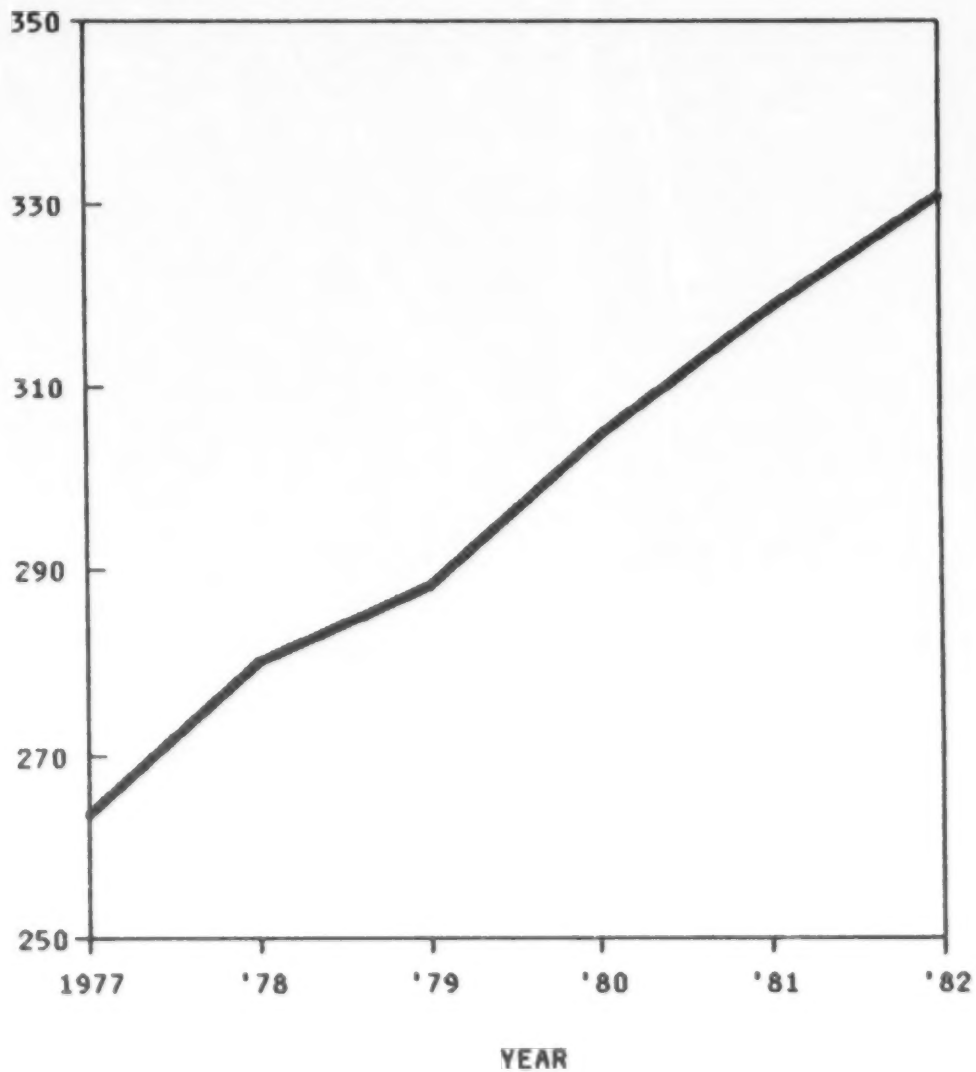
The total vehicle-kilometres travelled by urban transit vehicles has increased steadily from 263 million kilometres in 1977 to 331 million kilometres in 1982 (an increase of 25.7%). This rise reflects the fuel consumption increases over the same time period.

**Table 2.3.5/ Urban Transit: Total Vehicle-Kilometres Travelled, Ontario,
1977-1982**

YEAR	MOTOR BUS (millions)	TROLLEY COACH (millions)	STREETCAR (millions)	SUBWAY (millions)	COMMUTER RAIL (millions)	TOTAL (millions)
1977	184.0	9.7	15.3	54.4	-	263.5
1978	193.9	9.7	15.0	61.4	-	280.1
1979	203.0	9.8	14.7	60.8	-	288.3
1980	217.3	9.8	15.2	62.1	0.1	304.4
1981	223.8	9.7	15.0	68.5	1.5	318.5
1982	235.6	8.8	15.1	69.6	2.0	331.1

Source: Canadian Urban Transit Association

TOTAL URBAN
TRANSIT TRAVEL
(MILLIONS OF KILOMETRES)



Source : Canadian Urban Transit Association

Figure 2.3.5/ Urban Transit: Total Vehicle-Kilometres Travelled,
Ontario, 1977-1982

UNITED STATES
DEPARTMENT OF AGRICULTURE
BUREAU OF PLANT INDUSTRY



UNITED STATES DEPARTMENT OF AGRICULTURE

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF PLANT INDUSTRY

2.4/ Motorcycle Registration (1970-1971)

Motorcycle registration is a process by which the state of California collects and records information on all motorcycles and mopeds. This information is used for a variety of purposes, including the collection of taxes and the enforcement of traffic laws. The registration process is administered by the Department of Motor Vehicles (DMV) and is a requirement for all motorcycles and mopeds operating on public roads in California.

2.4/ MOTORCYCLES AND MOPEDS

2.4.1/ Motorcycle Registrations, Ontario, 1970-1982

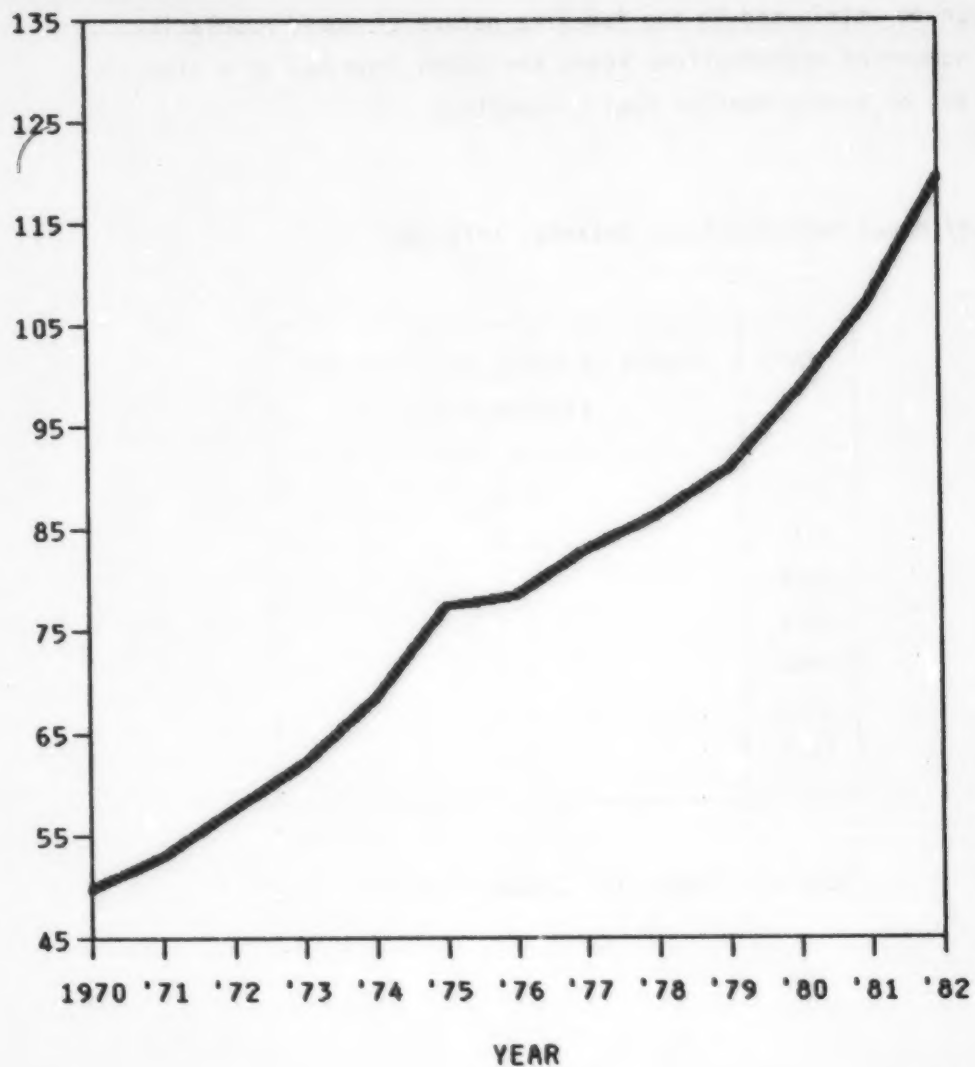
Motorcycle registrations have increased by a greater proportion than automobile and truck registrations. Between 1970 and 1982, total motorcycle registrations increased by 140%. Because motorcycles are used seasonally and mainly for recreational purposes, the influence of motorcycle use upon total provincial fuel consumption remains minimal. However, over the last decade, this influence has grown.

Table 2.4.1/ Motorcycle Registrations, Ontario, 1970-1982

YEAR	NUMBER OF MOTORCYCLES (thousands)
1970	49.8
1971	52.8
1972	57.7
1973	62.2
1974	68.4
1975	77.3
1976	78.3
1977	82.9
1978	86.4
1979	90.9
1980	98.5
1981	107.2
1982	119.6

Source: Statistics Canada (53-219)

**MOTORCYCLE
REGISTRATIONS
(THOUSANDS)**



Source : Statistics Canada (53-219)

Figure 2.4.1/ Motorcycle Registrations, Ontario, 1970-1982

2.4.2/ Moped Registrations, Ontario, 1976-1982

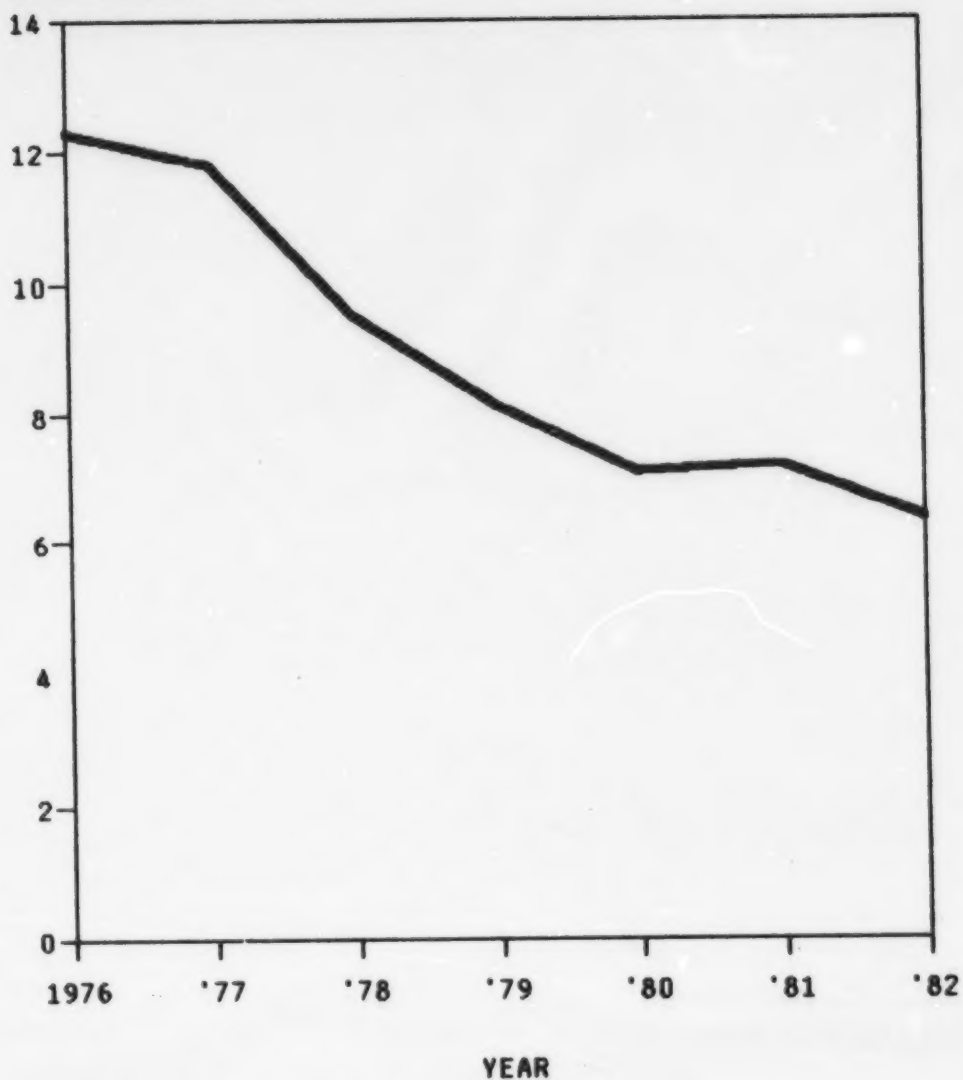
Since 1976, the number of moped registrations has declined by 48%. This decrease can be attributed to the fad-like nature of moped popularity. The small number of registrations keeps the moped from having a significant impact on transportation fuel consumption.

Table 2.4.2/ Moped Registrations, Ontario, 1976-1982

YEAR	NUMBER OF MOPED REGISTRATIONS (thousands)
1976	12.3
1977	11.8
1978	9.5
1979	8.1
1980	7.1
1981	7.2
1982	6.4

Source: Statistics Canada (53-219)

HOPED
REGISTRATIONS
(THOUSANDS)



Source : Statistics Canada (53-219)

Figure 2.4.2/ Hoped Registrations, Ontario, 1976-1982

STANDARD TELETYPE TRANSMISSIONS IN ALPHABETIC ORDER

1941-1942

STANDARD TELETYPE TRANSMISSIONS IN ALPHABETIC ORDER

STANDARD TELETYPE TRANSMISSIONS IN ALPHABETIC ORDER

STANDARD TELETYPE TRANSMISSIONS IN ALPHABETIC ORDER

APPENDICES

APPENDIX A/ ONTARIO GOVERNMENT POLICY TARGETS

Base year is 1980.

- A 33% decrease in fuel consumption per passenger-kilometre by 1995;
- a 20% decrease in fuel consumption per tonne-kilometre by 1995; and
- a 2% substitution of petroleum products by 1985 and 10% by 1995.

APPENDIX B/ CONSUMER PRICE INDEX, ONTARIO, 1971-1983

YEAR	CONSUMER PRICE INDEX
1971	48.0
1972	49.8
1973	52.1
1974	56.4
1975	61.9
1976	67.3
1977	72.2
1978	76.6
1979	82.5
1980	90.2
1981	100.0
1982	110.8
1983	117.7

Source: Statistics Canada (62-001)

APPENDIX C/ METRIC CONVERSION TABLE

1 mile	= 1.609 km
1 kilometre	= 0.621 miles
1 barrel	= 158.987 litres = 34.972 gallons (Imperial) = 6.12 gigajoules = 9702.0 cubic inches
1 gallon (Imperial)	= 4.546 litres
1 gallon (U.S.)	= 3.785 litres
1 litre	= 0.22 gallons (Imperial) = 0.264 gallons (U.S.)
1 megalitre	= 1.0×10^6 litres = 1.0×10^3 cubic metres
1 gigajoule	= 1.0×10^9 joules
1 terajoule	= 1.0×10^{12} joules
1 petajoule	= 1.0×10^{15} joules

ENERGY CONTENT OF FUELS

1 gigajoule	= 28.855 litres of gasoline
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